Regression without regrets

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Table of contents

# Preface

The focus of this report is to provide guidance on conducting initial data analysis in a reproducible manner in the context of intended regression analyses.

# 1. Univariate distribution checks

This section reports a series of univariate summary checks of the bacteremia dataset.

## 1.1 U1: Categorical variables

Age group, sex and bactermia status are described by frequencies and proportions in each category.

| Category | Count | Proportion |
| --- | --- | --- |
| Age group |
| [16, 50] | 5365 | 0.37 |
| (65, 101] | 5076 | 0.35 |
| (50, 65] | 4250 | 0.29 |
| Sex |
| male | 8536 | 0.58 |
| female | 6155 | 0.42 |
| Presence of bactermia |
| no | 13511 | 0.92 |
| yes | 1180 | 0.08 |

Also plot the categories.

|  |
| --- |
| Summary of categorical variables including outcome |

## 1.2 Continuous variables

### 1.2.1 U2: Univariate distributions of continuous variables

#### 1.2.1.1 U2: Structural variables

The only structural continuous variables is AGE. This variable is also a key predictor (see below).

#### 1.2.1.2 U2: Key predictors

Note: the structural variable Age is also considered a key predictor.

Distribution of key predictors. Lines indicate the 5-number summary including reported numerical values (where possible).

|  |  |  |
| --- | --- | --- |
| PLT 300 719  BUN 300 948  CREA 300 675  NEU 300 375  AGE 85 85  WBC 300 2711 |  |  |

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#### 1.2.1.3 U2: Predictors of medium importance

|  |  |  |
| --- | --- | --- |
| ALAT 200 579  ASAT 200 651  CRP 200 3329  FIB 200 1085  GGT 200 859  POTASS 200 409 |  |  |

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#### 1.2.1.4 U2: Remaining predictors

|  |  |  |
| --- | --- | --- |
| APTT 200 632  ALB 200 402  AP 200 673  AMY 200 489  BASOR 200 420  BASO 19 19  GBIL 200 886  CA 186 186  CHOL 200 340  CHE 200 998  CK 200 1507  EOSR 200 928  EOS 37 37  GLU 200 390  HCT 200 405  HGB 158 158  LDH 200 1138  LIP 200 445  LYMR 200 3122  LYM 115 115  MG 147 147  MCH 200 233  MCHC 125 125  MCV 200 507  MPV 72 72  MONOR 200 2335  MONO 68 68  NEUR 200 3851  NT 150 150  PAMY 200 281  PHOS 200 307  PDW 168 168  RDW 174 174  RBC 66 66  SODIUM 59 59  TP 200 650  TRIG 200 539  HS 170 170 |  |  |

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### 1.2.2 Numerical summaries

#### 1.2.2.1 Key predictors

kurtosis max max\_1 max\_2 max\_3 max\_4 max\_5   
 50 50 50 50 50 50 50   
 mean median min min\_1 min\_2 min\_3 min\_4   
 50 50 50 50 50 50 50   
 min\_5 mode n\_distinct qt\_05 qt\_10 qt\_25 qt\_50   
 50 50 50 50 50 50 50   
 qt\_75 qt\_90 qt\_95 range sd skewness   
 50 50 50 50 50 50

| PARAM | PARAMCD | mean | min | median |
| --- | --- | --- | --- | --- |
| Activated partial thromboplastin time (sec) | APTT | 40.05639928 | 21.40 | 37.7000000 |
| Alanin transaminase (U/L) | ALAT | 67.66221541 | 0.00 | 26.0000000 |
| Albumin (G/L) | ALB | 33.42457933 | 10.00 | 33.6000000 |
| Alkaline phosphatase (U/L) | AP | 118.77955007 | 11.00 | 84.0000000 |
| Amylase (U/L) | AMY | 90.83225088 | 8.00 | 49.0000000 |
| Aspartate transaminase (U/L) | ASAT | 86.89525006 | 3.00 | 31.0000000 |
| Basophile ratio (%) | BASOR | 0.14504559 | 0.00 | 0.0000000 |
| Basophiles (G/L) | BASO | 0.01724991 | 0.00 | 0.0000000 |
| Bilirubin (mg/dl) | GBIL | 1.40627774 | 0.11 | 0.7700000 |
| Blood platelets (G/L) | PLT | 220.02546249 | 0.00 | 204.0000000 |
| Blood urea nitrogen (mg/dl) | BUN | 22.65653971 | 2.50 | 16.6000000 |
| C-reactive protein (mg/dl) | CRP | 10.91585237 | 0.00 | 8.5700000 |
| Calcium (mmol/L) | CA | 2.21379650 | 1.03 | 2.2200000 |
| Cholesterol (mg/dl) | CHOL | 150.79991706 | 25.00 | 145.0000000 |
| Cholinesterase (kU/L) | CHE | 4.79039611 | 0.98 | 4.6000000 |
| Creatinine (mg/dl) | CREA | 1.32930498 | 0.26 | 1.0000000 |
| Creatinine kinases (U/L) | CK | 385.01435255 | 8.00 | 80.0000000 |
| Eosinophil ratio (%) | EOSR | 1.29742747 | 0.00 | 0.5882353 |
| Eosinophils (G/L) | EOS | 0.11481863 | 0.00 | 0.1000000 |
| Fibrinogen (mg/dl) | FIB | 547.36481359 | 55.00 | 529.0000000 |
| Gamma-glutamyl transpeptidase (G/L) | GGT | 115.05838112 | 3.00 | 49.0000000 |
| Glucoses (mg/dl) | GLU | 126.40565768 | 19.00 | 113.0000000 |
| Haematocrit (%) | HCT | 34.48307734 | 0.00 | 34.3000000 |
| Haemoglobin (G/L) | HGB | 11.56801365 | 3.00 | 11.4000000 |
| Lactate dehydrogenase (U/L) | LDH | 331.15165292 | 39.00 | 239.0000000 |
| Lipases (U/L) | LIP | 63.82141557 | 0.00 | 23.0000000 |
| Lymphocyte ratio (% (mg/dl)) | LYMR | 14.61410741 | 0.00 | 11.3402062 |
| Lymphocytes (G/L) | LYM | 1.36577725 | 0.00 | 1.0000000 |
| Magnesium (mmol/L) | MG | 0.81360084 | 0.20 | 0.8100000 |
| Mean corpuscular hemoglobin (fl) | MCH | 29.57993037 | 14.90 | 29.7000000 |
| Mean corpuscular hemoglobin concentration (g/dl) | MCHC | 33.47141784 | 23.70 | 33.5000000 |
| Mean corpuscular volume (pg) | MCV | 88.35160762 | 51.00 | 88.3000000 |
| Mean platelet volume (fl) | MPV | 10.38182858 | 7.30 | 10.3000000 |
| Monocyte ratio (%) | MONOR | 8.79255066 | 0.00 | 8.0000000 |
| Monocytes (G/L) | MONO | 0.85273797 | 0.00 | 0.8000000 |
| Neutrophile ratio (%) | NEUR | 75.15086887 | 0.00 | 78.3333333 |
| Neutrophiles (G/L) | NEU | 8.36677648 | 0.00 | 7.3000000 |
| Normotest (%) | NT | 83.22087696 | 4.00 | 83.0000000 |
| Pancreas amylase (U/L) | PAMY | 41.65830804 | 1.00 | 22.0000000 |
| Patient Age (years) | AGE | 56.16806208 | 16.00 | 58.0000000 |
| Phosphate (mmol/L) | PHOS | 1.04768756 | 0.30 | 0.9900000 |
| Platelet distribution width (%) | PDW | 12.29323718 | 6.60 | 12.0000000 |
| Potassium (mmol/L) | POTASS | 4.00301191 | 1.92 | 3.9500000 |
| Red blood cell distribution width (%) | RDW | 14.99738299 | 10.60 | 14.5000000 |
| Red blood count (T/L) | RBC | 3.93573436 | 1.00 | 3.9000000 |
| Sodium (mmol/L) | SODIUM | 137.21135059 | 106.00 | 137.0000000 |
| Total protein (G/L) | TP | 64.90141135 | 29.90 | 65.7000000 |
| Triclyceride (mg/dl) | TRIG | 141.70799585 | 14.00 | 115.0000000 |
| Uric acid (mg/dl) | HS | 5.41254514 | 1.30 | 5.0000000 |
| White blood count (G/L) | WBC | 11.22715651 | 0.00 | 9.6000000 |

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14649 | 42 | 718 | 1 | 220 | 130.1 | 50 | 81 | 140 | 204 | 277 | 369 | 445 |

lowest : 0 1 2 3 4 , highest: 1068 1211 1321 1639 2092

CREA: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAWUlEQVQ4je2TMQoAIAwDE///aG3sIAqCWwqeQ6mKHoWAAqAXaAKD5sT3euN7vZE5DC+rSM4pSctqYBW8nMxqePm4RQjB1Usd93LuXK5pUU9nZX6TzT36cdoBj3gMym+2tjYAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14532 | 159 | 674 | 1 | 1.329 | 0.8518 | 0.620 | 0.690 | 0.810 | 1.000 | 1.350 | 2.160 | 3.144 |

lowest : 0.26 0.27 0.28 0.29 0.30 , highest: 15.24 15.40 15.67 16.64 20.75

BUN: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZElEQVQ4jdXTwQrAIAwD0NT//+jhaiZ0U7wlCz1IT49iEAx6wiVozO1qLvmJywZWXS4yMgAzF///jLSHzPteHidLA2rEqqVLTlu7tDbsWEJhb98BCzFn//xalW0WbsxT/1yMV1y21QwKyo8xNQAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14519 | 172 | 947 | 1 | 22.66 | 16.92 | 7.1 | 8.6 | 11.6 | 16.6 | 26.9 | 44.8 | 60.8 |

lowest : 2.5 2.7 2.8 2.9 3.0 , highest: 160.6 171.3 171.9 176.0 184.8

NEU: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZ0lEQVQ4jc2VSw7AIAgFx97/0A19JUVru+WNnwCriRFlJKDlAUcCWh5Ur8BFbfXC18tCLRXAzCvv/0RrK8rn1nvTfF6+Xnq4dnR7/eHqRc9by9qKG+LbvMaz1bgWRkzFJZ077TOpxRPORQvfG+yn6gAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13963 | 728 | 374 | 1 | 8.367 | 5.776 | 1.60 | 2.70 | 4.60 | 7.30 | 10.80 | 15.08 | 18.40 |

lowest : 0.0 0.1 0.2 0.3 0.4 , highest: 54.0 56.4 63.7 71.6 83.8

WBC: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAIIAAAANCAMAAABSO0bCAAAACVBMVEUAAADMzMz////1iUV5AAAAVklEQVQ4je2TSwoAIAhEx+5/6PwRSdB2XDiRVG4e0oNoACEGSwOvrDRBwCA0QHAhqErkFJhjGIQbgciAJGAihBBPQhNb4hf7uVLM8d45Rwm/6vPfBt0b3GoLNRPwTDwAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14229 | 462 | 2710 | 1 | 11.23 | 7.602 | 2.66 | 4.26 | 6.63 | 9.60 | 13.53 | 18.22 | 22.27 |

lowest : 0.00 0.01 0.02 0.03 0.04 , highest: 365.30 383.74 387.73 433.83 604.47

AGE: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAeUlEQVQ4jcXTSw4AERAE0Gr3P/REhzDM+PSHWohVe0iB7IMczYxgGSCgimaSpemF0tFUrnxuz1HLpK4hpZWlxcNVTeXtjkvyevPOgHsldXyEVoraXCDdqby9X9b/0VMhd51VzWi4hhrLLrt+cdw1y7YJEgtalughegBpCgbX7iPW9QAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14691 | 0 | 85 | 1 | 56.17 | 20.78 | 24 | 29 | 43 | 58 | 70 | 79 | 84 |

#### 1.2.2.2 Predictors of medium importance

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12124 | 2567 | 1084 | 1 | 547.4 | 231 | 247 | 301 | 397 | 529 | 674 | 816 | 892 |

lowest : 55 60 66 67 69 , highest: 1506 1508 1529 1537 1593

POTASS: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAADcAAAANCAMAAAA65Aa/AAAACVBMVEUAAADMzMz////1iUV5AAAAO0lEQVQokWNgZGRkYGAkGTAwMTExgAgSwQDoY6CrPlBwkhGgEPtIt3Do6GMgTx84OKEAFE4gRDB4GRgBpaoEm4UN9kgAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12683 | 2008 | 408 | 1 | 4.003 | 0.6004 | 3.20 | 3.39 | 3.66 | 3.95 | 4.29 | 4.67 | 4.92 |

lowest : 1.92 2.07 2.11 2.12 2.21 , highest: 8.57 11.34 13.55 14.60 36.62

Value 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5  
 Frequency 6 91 650 3385 5088 2455 692 201 73 26 7 2  
 Proportion 0.000 0.007 0.051 0.267 0.401 0.194 0.055 0.016 0.006 0.002 0.001 0.000  
   
 Value 8.0 8.5 11.5 13.5 14.5 36.5  
 Frequency 2 1 1 1 1 1  
 Proportion 0.000 0.000 0.000 0.000 0.000 0.000

For the frequency table, variable is rounded to the nearest 0.5

ASAT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAUUlEQVQ4je2TOw4AIAjFivc/tKiRz8jGQCNRgeEtRQSkH6yFVjsmV43JVYPxsUTrXA2DTa4a10cjvnPnKPKOfbRuCxOav2NW+e3SB/3Jk7CwAYVuDSQpvkmaAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13537 | 1154 | 650 | 1 | 86.9 | 115.6 | 15 | 17 | 22 | 31 | 56 | 121 | 218 |

lowest : 3 5 6 7 8 , highest: 10845 11928 12079 12380 13991

ALAT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAGcAAAANCAMAAACD8ID3AAAACVBMVEUAAADMzMz////1iUV5AAAAPElEQVQ4jWNgZGBgpANgYGJgYKIDGLVnkNszmt5G7YHaQw+LQOkNBaNxIImFEZwqQWJoyRNrYsUQAwoAAOjvCPHpfMT7AAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13704 | 987 | 578 | 1 | 67.66 | 90.07 | 9 | 11 | 16 | 26 | 48 | 101 | 175 |

lowest : 0 1 2 3 4 , highest: 7109 9136 9314 12329 15059

GGT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAWElEQVQ4je2TOQoAIBADE///aPdQQVHQLoWD8WwGIaABUA0UAzFL8b3egFt9r2vgbdTso+Z/pZecmLqXmtjwEjNrfQyY2S5ty8M7ffTEufdqbtl6se+ipQIV2Az96NLBUwAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13429 | 1262 | 858 | 1 | 115.1 | 141.3 | 13.0 | 16.0 | 25.0 | 49.0 | 117.0 | 262.2 | 429.0 |

lowest : 3 5 6 7 8 , highest: 2932 3303 3782 3919 5171

CRP: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAaElEQVQ4je2T0QrAIAhFr/7/R5fLVVsRbrD0YUcs9OkgXFAGoGiAGRmOhnqFM/u9nlG9ilkYP0gab3hnUejuNeB6r4WXp57By8XO7LVZ8Y3Xafel4SyPNuhoKf1aTRbUjSVw2tcU1jcBTcULVJrKiXAAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14536 | 155 | 3328 | 1 | 10.92 | 10.39 | 0.29 | 0.77 | 2.87 | 8.57 | 16.45 | 24.49 | 29.61 |

#### 1.2.2.3 Remaining predictors

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14649 | 42 | 506 | 1 | 88.35 | 6.992 | 78.2 | 81.1 | 84.7 | 88.3 | 92.0 | 95.9 | 99.0 |

lowest : 51.0 52.6 54.9 56.3 57.5 , highest: 121.0 121.8 124.6 127.9 128.7

HGB: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAeklEQVQ4jcXVjQqAIAwE4LP3f+jYlQoh4W5TD8MKfz6EIYoY1PD9eRKDSwiG4X9lueEWea7uO+H6NzVblLfIFT437+x5VszmqyKnitlQjwpLPLMNLgnnmBBQrXOFUAJuYmwKyYvj9cZmN5w1+2CP1ufmuzo3rGX4EsoNO8II7dvgDOcAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14650 | 41 | 157 | 1 | 11.57 | 2.558 | 8.2 | 8.8 | 9.9 | 11.4 | 13.2 | 14.6 | 15.4 |

lowest : 3.0 3.1 3.5 3.9 4.1 , highest: 19.5 20.5 20.7 20.8 21.0

HCT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAcklEQVQ4jc3TUQrAIAwD0Or9Dy1miAjq2kTB/NT91Icjlk7EkDaObMxibBp1a77kkmmqa8kSbZprr1Jkiutfxcv49vhUbD35h/aHWn+fRcnY3/+kK6hicHEXh4rSal2mlUGRsGxsnruHm6Q+2+34+k6YBR+yCdg4QZ3BAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14649 | 42 | 404 | 1 | 34.48 | 7.316 | 24.6 | 26.4 | 29.8 | 34.3 | 39.1 | 42.9 | 44.8 |

lowest : 0.0 0.1 0.2 9.7 9.8 , highest: 61.4 61.9 63.2 65.3 66.6

MCH: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAdElEQVQ4jeWTUQqAMAxDo/c/9Kqb0tZNcMmHaECXr8ejECx0YOEpGbqSwR57WFDC0oC3e2nNSBjwNy9qNGdaVa2R2WM7kruX8mZf8woy3kukNkO5yEQvidkjxkgmewnctgnZmuovlE51yxtVV25RR+1u0b4CzcYLwaC5pgUAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14649 | 42 | 232 | 1 | 29.58 | 2.693 | 25.3 | 26.7 | 28.4 | 29.7 | 31.0 | 32.4 | 33.4 |

lowest : 14.9 15.6 15.9 16.0 16.5 , highest: 42.0 42.3 42.4 42.5 47.4

MCHC: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAcUlEQVQ4jd2T0QoAERRE5/r/j17cJQkrM7Vloni446QOTBO8EdUZgiSo0fQFOZeITNKCPoJKPdTdXLQ4w/zu4xiL/zGuYEbFkxHjKyga7Hz6C4tDOxndIWLRkjluD8pyy/LKupVLe9pP12DtKzMX434A7S8LO8VcvNwAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14649 | 42 | 124 | 0.999 | 33.47 | 1.546 | 31.1 | 31.7 | 32.6 | 33.5 | 34.4 | 35.2 | 35.6 |

lowest : 23.7 24.4 24.8 25.1 26.1 , highest: 38.3 38.4 38.9 39.3 43.5

RDW: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAdElEQVQ4jc3TgQqAMAgE0Fv//9G1JErPjTbo1oEEDvIhiJIEluxJFWwc3EleNeHJcFlAMgV38AcZjY2sKluAe+NasTU6uoZLfZ1hEU2Veml+Vp+llA26ZLYJl4Tnfj/C+lhYz8xqEnWmcCWt0LbJ1/d5i0ftuIIK0HvoXwYAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14635 | 56 | 173 | 1 | 15 | 2.385 | 12.4 | 12.7 | 13.4 | 14.5 | 16.0 | 18.0 | 19.5 |

lowest : 10.6 11.1 11.2 11.3 11.4 , highest: 28.6 28.9 29.1 29.7 31.8

MPV: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAdUlEQVQ4jc3T3QrAIAgFYNv7P/SKGdhF5fFndaKLBurHQCqWUIupUj3hQUJjvg9QB/Ukj0sAT7pmqgyZuuEKlWC71gUsoC6/7SNgivtx2x64KsS2qbeq3LJFtcfk5s3KglBmYVufvkJU167wyYhoz0PEgx39vmZECVh6tdxsAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13989 | 702 | 71 | 0.999 | 10.38 | 1.132 | 8.9 | 9.2 | 9.7 | 10.3 | 11.0 | 11.7 | 12.2 |

lowest : 7.3 7.7 7.8 7.9 8.0 , highest: 14.2 14.3 14.6 14.8 15.0

LYM: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAADQAAAANCAMAAADR0728AAAACVBMVEUAAADMzMz////1iUV5AAAAJ0lEQVQokWNgYGAkGTAwMDCRDIapptHQo0QTCDBCICNGUGIJXQZGAAh1BHO9ZpTEAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14429 | 262 | 114 | 0.998 | 1.366 | 1.162 | 0.2 | 0.4 | 0.7 | 1.0 | 1.6 | 2.1 | 2.6 |

lowest : 0.0 0.1 0.2 0.3 0.4 , highest: 149.9 357.5 366.8 375.1 578.1

Value 0 5 10 15 20 30 35 40 45 75 100 115  
 Frequency 13675 703 27 7 4 2 1 1 1 1 1 1  
 Proportion 0.948 0.049 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000  
   
 Value 150 360 365 375 580  
 Frequency 1 1 1 1 1  
 Proportion 0.000 0.000 0.000 0.000 0.000

For the frequency table, variable is rounded to the nearest 5

MONO: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZElEQVQ4jc3TQQrAIAxE0R/vf+g2SQVt6/7PQkQMPAJDVLgTpjAq6RqmtAZsMLULt8sEqxZOl6iS275EC0sK+GBsLA/s7bLAPi6JjKWN5wT1L7q9T2PqmC/0cWrXMrde/wfy9QKVEwyUdyZZMgAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14445 | 246 | 67 | 0.996 | 0.8527 | 0.5965 | 0.1 | 0.3 | 0.5 | 0.8 | 1.1 | 1.5 | 1.8 |

lowest : 0.0 0.1 0.2 0.3 0.4 , highest: 13.9 14.6 16.2 17.3 20.4

EOS: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAG0AAAANCAMAAACU0hA+AAAACVBMVEUAAADMzMz////1iUV5AAAAQklEQVQ4jWNgZGBgpBtgYGJgYKIbGLWNmrbRzzoGYJqkX6Kks9/obxvdrBvWtoHSJBoAFZ3AdIqUVvGlWgacHEyFAKxGCXLIBO+sAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14556 | 135 | 36 | 0.867 | 0.1148 | 0.1585 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 |

lowest : 0.0 0.1 0.2 0.3 0.4 , highest: 3.8 5.3 9.6 11.5 15.8

BASO: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAADcAAAANCAMAAAA65Aa/AAAACVBMVEUAAADMzMz////1iUV5AAAAJklEQVQokWNgYGAkBzAwMDCRA0aAvtHwxK6PLI0MqAASVoRDkxEAwHkEtC6j9aoAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14545 | 146 | 18 | 0.337 | 0.01725 | 0.03111 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |

lowest : 0.0 0.1 0.2 0.3 0.4 , highest: 1.3 1.4 1.5 2.2 6.5

Value 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1  
 Frequency 12671 1636 109 59 31 14 6 7 1 2 1 2  
 Proportion 0.871 0.112 0.007 0.004 0.002 0.001 0.000 0.000 0.000 0.000 0.000 0.000  
   
 Value 1.2 1.3 1.4 1.5 2.2 6.5  
 Frequency 1 1 1 1 1 1  
 Proportion 0.000 0.000 0.000 0.000 0.000 0.000

NT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAg0lEQVQ4jc2U2wqAMAxDM///o7UMUbt2621gJDD30B4iEa1IQDc/R8cdBQJkZ0buYvoxVwYvxTXL6sUVYYtzscULLi9bvDVX4e7eKZau9/ZRCWSRlyc3P5e6mGTisrD5uIbFBsXY1lzy1JjsvxF2P/0S5ZrESBXB8+Dj8bVWfF93I6YTnuAJy58nGcwAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12224 | 2467 | 149 | 1 | 83.22 | 30.56 | 35 | 48 | 67 | 83 | 101 | 118 | 128 |

lowest : 4 5 6 7 8 , highest: 148 149 150 151 152

APTT: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAbklEQVQ4je2TQQ7AIAgEl/7/0Y0ULautPS6HDlERLxOThTGAlQAHg3kggjXgiFSIJ68KZqSA3+sLit/wUqUwqZAkyvxYEgCjc3KZ1M7orJLXYqUV23oJ7Vr00OodixrN/tKvtr7d0whd7Ne4H75OK0cMQxHtiFsAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12142 | 2549 | 631 | 1 | 40.06 | 9.533 | 30.1 | 31.4 | 34.1 | 37.7 | 42.7 | 49.9 | 56.6 |

lowest : 21.4 21.6 23.4 23.5 23.6 , highest: 160.7 163.0 168.7 171.6 176.1

SODIUM: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAeklEQVQ4je2TUQqAMAxDE+9/aLc66uqGig0IYvYTBsteCwFlQpEubJEITZq0GiiKgZhMkVNgfq77CYhcGrR8g6yGOxc1pcwO50vq9qXY2De5Akywr3EFnJErS/bo+cgw40qh1fJYgWDHDc5M172DiXfXSfTybr83AnIFjHcLui7Xzt8AAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13409 | 1282 | 58 | 0.994 | 137.2 | 5.034 | 129 | 132 | 135 | 137 | 140 | 142 | 144 |

lowest : 106 108 109 110 112 , highest: 161 165 166 168 170

CA: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAdklEQVQ4jc3T0QrAIAgF0Gv//9FjkmUjRrfl0F6SMA+RkI2Axk7leovCBlBQg64luvAVKV3KSeeqHCBc9tEVJmOmyijiXQnmsT3RH+9Fq3K5BgoQLjvhiqAtXDmDxLvuv68DMCyfPAZwlr5U2+3WoyXSTy11mwvxHQuvQvNUbgAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13415 | 1276 | 185 | 1 | 2.214 | 0.2213 | 1.89 | 1.96 | 2.09 | 2.22 | 2.35 | 2.45 | 2.51 |

lowest : 1.03 1.15 1.18 1.20 1.23 , highest: 3.84 3.88 3.96 4.18 4.40

PHOS: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAa0lEQVQ4jc2TSQoAIQwEO/7/0YML0SzmOG0RhPTFQmlIAOhDBs2BiY//xglA4ehsEbvhFbG7F1fsWS9TAguri0PldAzQnuv8x6hFFNObMyuiGEornhlqKZoeYg3vyD6lCEafdGa6trR6WfABbasLwR0lD8AAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13449 | 1242 | 306 | 1 | 1.048 | 0.3993 | 0.55 | 0.64 | 0.81 | 0.99 | 1.20 | 1.47 | 1.74 |

lowest : 0.30 0.31 0.32 0.33 0.34 , highest: 4.36 4.43 4.53 5.48 6.22

MG: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAfElEQVQ4jc2TgQqAIAxEb/3/R9dWStq0K5n4Ch2k2yM4CA+UD+dHwEaDBH/lP+wQFIQqnfPYc5PFyAlY0qu2muFFhePJCnl0tMJ/2Wt7XypcbMAr1Kzbu+cUrNZuTEgFymmwcDyaObH32rwQtihv1W0kVTbKPll9W/KW6x1Hygtarmv88wAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12822 | 1869 | 146 | 0.999 | 0.8136 | 0.1609 | 0.59 | 0.64 | 0.72 | 0.81 | 0.89 | 0.98 | 1.06 |

lowest : 0.20 0.21 0.22 0.26 0.28 , highest: 1.83 1.88 1.96 2.07 2.22

HS: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAd0lEQVQ4je3V0QqAIAyF4X+9/0Nnm4TiEinauuigKLv6UKaIF3DLgWHzgl8OzABQ0u+6Sg8onoOErpbvuIxDLqxvvNKHVSO0yexHu8DxvHKOrXN5niQcDWpuiqVRWWuoOByVdSsvvnNoFz6JrE859/YF6xheBK3symYLHOFQ42YAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11630 | 3061 | 169 | 1 | 5.413 | 2.625 | 2.2 | 2.7 | 3.7 | 5.0 | 6.6 | 8.5 | 10.0 |

lowest : 1.3 1.4 1.5 1.6 1.7 , highest: 19.8 20.2 22.2 22.3 22.7

GBIL: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAXklEQVQ4je2TUQrAIAxDk93/0HZpq+BgbH/5MGItbZWHEDAE0E24QlC00uH6J3MuOzA5EX6GtP0vhcP1Vc3lBja5zMhuI6LEtZ/pa1Mpwa5Qz2rlWdW8wu7XwOZE1QZdRA0CQR2HNAAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13250 | 1441 | 885 | 1 | 1.406 | 1.477 | 0.33 | 0.39 | 0.53 | 0.77 | 1.23 | 2.34 | 3.96 |

lowest : 0.11 0.12 0.13 0.14 0.15 , highest: 42.82 43.83 45.10 51.72 51.77

TP: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAh0lEQVQ4jcWV2w7AIAhD6/7/oxfsJNuyecFGGyL6IJ6gCNK8ADOtcIQEmNGBCwRD/RwQhkIhcu3j8szgS8qUDUSqEO3jur2kljRcffWW2jiuNfU4AKRMWT1E172t5opCSdD+9k8QSdDem8FvXKU4l7393OHY5lBGja7e6T5P2VETjeX7KGJbnJG6CWzjhVAaAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13108 | 1583 | 649 | 1 | 64.9 | 12.97 | 45.20 | 49.47 | 56.90 | 65.70 | 73.30 | 78.80 | 82.00 |

lowest : 29.9 30.0 30.3 30.5 30.6 , highest: 107.8 108.1 108.7 112.8 120.9

ALB: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAe0lEQVQ4jb3VUQ4AEQwE0Kn7H9rSn9pEtEM7HyIIL5ICeRwAps9v0y7zObS10VGdIrclMZbyV63ERulYVzAlrrCK0MVctCgsi1TMtQr+Ag3c1wvWjOuwcpUPdlxzeAayaKcFGSaPbTuZCTK0nW4UCMZHpo3tVmU9enpEOnyCB5E+XdsVAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13015 | 1676 | 401 | 1 | 33.42 | 8.513 | 21.3 | 23.6 | 27.9 | 33.6 | 39.1 | 43.2 | 45.2 |

lowest : 10.0 10.2 10.5 10.6 10.7 , highest: 52.9 53.2 53.7 54.0 55.7

AMY: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAACUAAAANCAMAAAAZv1dqAAAACVBMVEUAAADMzMz////1iUV5AAAAH0lEQVQYlWNgYCQCMDAwEQEGr6qR4EcQwO4xRpg4AwAewgM2/m5ecQAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10778 | 3913 | 488 | 1 | 90.83 | 100.5 | 18 | 23 | 33 | 49 | 76 | 125 | 187 |

lowest : 8 9 10 11 12 , highest: 4984 5248 40372 43970 56146

Value 0 500 1000 1500 2000 2500 4000 4500 5000 40500 44000 56000  
 Frequency 10432 268 39 14 12 4 2 2 2 1 1 1  
 Proportion 0.968 0.025 0.004 0.001 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000

For the frequency table, variable is rounded to the nearest 500

PAMY: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAABYAAAANCAMAAACae25RAAAACVBMVEUAAADMzMz////1iUV5AAAAGklEQVQYlWNgYMQGGBiYsAHaCg8el2BzCwMAGi8B4ah/57sAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7577 | 7114 | 280 | 0.999 | 41.66 | 47.28 | 7 | 9 | 14 | 22 | 36 | 64 | 97 |

lowest : 1 2 3 4 5 , highest: 1673 2083 2116 3066 38369

Value 0 500 1000 1500 2000 3000 38500  
 Frequency 7495 65 7 6 2 1 1  
 Proportion 0.989 0.009 0.001 0.001 0.000 0.000 0.000

For the frequency table, variable is rounded to the nearest 500

LIP: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAEAAAAANCAMAAAAucZheAAAACVBMVEUAAADMzMz////1iUV5AAAAKklEQVQokWNgYGCkCDAwMDBRBEYNABswGguDwQAkAApVSNjCWATiiIERACyhBYM6jKyHAAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10992 | 3699 | 444 | 1 | 63.82 | 89.88 | 6 | 8 | 14 | 23 | 40 | 79 | 135 |

lowest : 0 1 2 3 4 , highest: 11469 15843 18560 22339 45991

CHE: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAc0lEQVQ4jb3TUQrAIAwD0HT3P/TQakFo2bBp86GCqA8hkCiY0VnGQoem4HEDP7bhnyLGfyFgHcJu17epw5d1VeGOOy9IJiPrdsXuSZaSPhJcGtZ/kVksGtgolaVxNa6ly7mqWCkiKFX8EwlXMqsMkVXpMb07Bwe5a1dAeQAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12244 | 2447 | 997 | 1 | 4.79 | 2.378 | 1.70 | 2.17 | 3.15 | 4.60 | 6.22 | 7.65 | 8.49 |

lowest : 0.98 0.99 1.00 1.01 1.02 , highest: 12.39 12.55 12.97 13.32 13.89

AP: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAH8AAAANCAMAAAC3iUHrAAAACVBMVEUAAADMzMz////1iUV5AAAAR0lEQVQ4jWNgBAIGBsaBAgxMQMAABEwDA0btH+H2Q9L/gOWAAff/YLF/gFwwiOwfEBcwQJM/GDCSD8FpGYyReSgpHYsIIyMAyJIK1pgJl1IAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13291 | 1400 | 672 | 1 | 118.8 | 91.51 | 42 | 49 | 63 | 84 | 123 | 206 | 302 |

lowest : 11 14 15 16 17 , highest: 1980 2132 2549 2596 2995

LDH: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAYUlEQVQ4je2VQQrAMAgEx/7/0VWzlR7agzcPDsQYkbAIi5gDNg0uh4yjWF09VlePdCLzDKl5jRvY6uoRgmCesNI1TFgYEVHJN2pU9FcuVrRdIzu3vRauqlQpv3na/rzo5wZjhw0MlTTx5wAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12977 | 1714 | 1137 | 1 | 331.2 | 240.9 | 136 | 152 | 187 | 239 | 332 | 508 | 724 |

lowest : 39 46 54 55 56 , highest: 10473 10784 10822 11246 13906

CK: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAHYAAAANCAMAAABLnGohAAAACVBMVEUAAADMzMz////1iUV5AAAAQElEQVQ4jWNgZGBgpD9gYGJgYKI/GLV2GFs7mpJHraW+tQNgMSglwwAjGoMRyoCkPShGkMg5gAGNjySBKQ4UAABqTQpC9fFEkwAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12611 | 2080 | 1506 | 1 | 385 | 615.4 | 18 | 25 | 42 | 80 | 184 | 577 | 1155 |

lowest : 8 9 10 11 12 , highest: 60799 63011 82180 83880 98801

GLU: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAYklEQVQ4je2TSwrAIAwFJ73/oVs/bWIRtKu8RWchBkUGYTAHMBU4Hi6tMCXze33j5SVjJusVEqjkJTjg/4PWf/kOJTN1LyKpRo2pl4BZ6Y8VkxtWyu319nOrb3lR47iZ4b2cJ/QMq8QIwM4AAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10499 | 4192 | 389 | 1 | 126.4 | 48.3 | 78 | 85 | 97 | 113 | 138 | 177 | 216 |

lowest : 19 22 23 26 28 , highest: 843 848 890 1349 1403

TRIG: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAF4AAAANCAMAAAAXFikFAAAACVBMVEUAAADMzMz////1iUV5AAAARElEQVQ4jWNgZGRgYKQZYGBiYgBiWoFR4wkZTzvzGUAph3ZJh9aup4fxNDOfPsbTynxIykED0HIIhhnhNLIIEcmGkREAyCUIGNCg8jUAAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9630 | 5061 | 538 | 1 | 141.7 | 90.33 | 54 | 64 | 83 | 115 | 165 | 241 | 307 |

lowest : 14 15 16 20 22 , highest: 1796 2247 2662 2918 5440

CHOL: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZ0lEQVQ4jc2TQQrAIAwEN/7/0Y1aBLep4sXNgAZyGgIDI+DwTgAKUb384/VtQi9k88JAfbI/L/XJ0npNERCqGG3qka2kF1t6CdXSe4VWOjNsrFRutTl8QmQsfi1he0efoydenLTo7wG9Hgvy83CMIQAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9646 | 5045 | 339 | 1 | 150.8 | 59.23 | 74 | 89 | 113 | 145 | 182 | 219 | 243 |

lowest : 25 26 27 28 29 , highest: 646 662 676 710 1104

BASOR: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAHMAAAANCAMAAACttaFlAAAACVBMVEUAAADMzMz////1iUV5AAAAPklEQVQ4jWNgZGBgpDNgYGJgYKIzGLVzmNk5mm5H7RyKdgLTLTbACMGgVAakGZHSNgOcQEuNjCgSuHIDUBwA2JUKBUCC2pEAAAAASUVORK5CYII=)

n missing distinct Info Mean Gmd .05 .10 .25   
 13959 732 419 0.322 0.145 0.2679 0.0000 0.0000 0.0000   
 .50 .75 .90 .95   
 0.0000 0.0000 0.5501 1.0526

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| lowest : | 0.0000000 | 0.1358696 | 0.1545595 | 0.1652893 | 0.1818182 |
| highest: | 11.1111111 | 15.2173913 | 16.6666667 | 18.4210526 | 23.6559140 |

EOSR: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAGEAAAANCAMAAACO7vCwAAAACVBMVEUAAADMzMz////1iUV5AAAARElEQVQ4je2SQQoAIAzDGv//aFEKQ/Da4cFCCzuFQYRENBrSiOYTHiG0uJR9ookQRXQRkpDlkoNbg4ddYetKPh3XTSSYF4MIVFDP+KgAAAAASUVORK5CYII=)

n missing distinct Info Mean Gmd .05 .10 .25   
 13959 732 927 0.891 1.297 1.825 0.0000 0.0000 0.0000   
 .50 .75 .90 .95   
 0.5882 1.7857 3.4900 5.0000

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| --- | --- | --- | --- | --- | --- |
| lowest : | 0.0000000 | 0.1834862 | 0.2028398 | 0.2178649 | 0.2188184 |
| highest: | 39.1752577 | 46.6019417 | 46.9026549 | 50.0000000 | 73.4883721 |

LYMR: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZ0lEQVQ4jdXTUQrAIAwD0NT7H9o5rBNXtV+mBhERwUchkC8okRhB0qAlBYjliiBrBNzg4tP0/5HFlmn/DBe1mphNizy1rYskc7ge2XkcHCzG4OBWnQXCruIu0q316X8tdR8fvDXUUwbBUQsZjNtF2AAAAABJRU5ErkJggg==)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13959 | 732 | 3121 | 1 | 14.61 | 11.87 | 2.752 | 4.000 | 6.757 | 11.340 | 18.182 | 27.869 | 36.620 |

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| --- | --- | --- | --- | --- | --- |
| lowest : | 0.0000000 | 0.3215434 | 0.4484305 | 0.4608295 | 0.4636785 |
| highest: | 97.2413793 | 97.4193548 | 98.0000000 | 99.1847826 | 100.0000000 |

MONOR: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAZUlEQVQ4jdWTQQrAIAwEJ/7/0U2tRkkRest2ZFHBwxBZbAPHNKAt6DQJ9L0ICnWCP3kpiEX/2Kls4tAJQaQGNhXQ83IN3qh6FZuRv1BEjdTEhD2x4ykud4d6Rpvn1petB1+66LkAcgcMIWflPQ8AAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13959 | 732 | 2334 | 1 | 8.793 | 5.4 | 2.000 | 3.390 | 5.634 | 8.000 | 10.870 | 14.141 | 17.021 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| lowest : | 0.0000000 | 0.2747253 | 0.3412969 | 0.3448276 | 0.4566210 |
| highest: | 68.5446009 | 69.2307692 | 70.3703704 | 72.7272727 | 100.0000000 |

NEUR: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAcUlEQVQ4jcXUgQqAIAwE0NP//+gsI8TtRDRvR0iMKY9oIgUETVhL1gZ9SsXtk5ocF8JdHonCZC6uinK9f9E4ZpN2+njU8zinMp/spGueZGHI5AJRozrZ/64l0CkXuzKXZbjnpT5w3kjZNHzrbp4jyzxeD/MJrwib458AAAAASUVORK5CYII=)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13959 | 732 | 3850 | 1 | 75.15 | 15.6 | 47.42 | 57.88 | 69.23 | 78.33 | 85.32 | 90.13 | 92.63 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| lowest : | 0.000000 | 1.484829 | 1.935484 | 1.960784 | 2.413793 |
| highest: | 99.122807 | 99.166667 | 99.476440 | 99.484536 | 100.000000 |

PDW: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAfklEQVQ4jc3V3QqAIAwF4LPe/6FrGV3o/optddCikPkljEB+AJ587Qs2PwBPILI2K+5ehwZz/uFa871LUrXIrB00VAdNbzJbheIG1T874Co8M6V0BFVKk+vGWVU2qeZD1a3LBC6lXqKyT5B7CvwH5DHuGaF5GC8IF2FQzmfaAVQ1CjiAt1m9AAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13589 | 1102 | 167 | 1 | 12.29 | 2.375 | 9.3 | 9.8 | 10.8 | 12.0 | 13.4 | 15.1 | 16.4 |

lowest : 6.6 6.8 6.9 7.0 7.1 , highest: 24.1 24.7 24.9 25.2 25.3

RBC: Parameter analysis value (Numeric)

![image](data:image/png;base64;base64,iVBORw0KGgoAAAANSUhEUgAAAJcAAAANCAMAAACTvAxuAAAACVBMVEUAAADMzMz////1iUV5AAAAcklEQVQ4jc3TUQrAMAgD0Lj7H7otlO7LGjWwZRT20/g2EFYIsM6bSkc04kkGTrI90RiNSm5Ldd1VX7kildRG93AqmYzeJd4l2U/y6zIqyT+jGrKq/7rasvB+xSSwXe92TE3b2h14jyJuu+3JZjhvexfnGZo2CX2KyxI1AAAAAElFTkSuQmCC)

| n | missing | distinct | Info | Mean | Gmd | .05 | .10 | .25 | .50 | .75 | .90 | .95 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14230 | 461 | 65 | 0.999 | 3.936 | 0.8772 | 2.7 | 2.9 | 3.4 | 3.9 | 4.5 | 4.9 | 5.2 |

### 1.2.3 Suggested transformations

Next we investigate whether a pseudolog transformation of continuous variables may substantially symmetrize the univariate distributions of the continuous variables, and may hence be useful for multivariate summaries. We employ a function ida\_trans for this purpose, which optimises the parameter sigma of the pseudo-logarithm for that purpose. The optimization targets the best possible linear correlation of the transformed values with normal deviates. If no better transformation can be found, or if the improvement in correlation is less than 0.2 correlation units, no transformation is suggested.

Display the proposed variable transformations and the new parameter codes.

| PARAMCD | n |
| --- | --- |
| ALAT\_T | 14691 |
| AMY\_T | 14691 |
| AP\_T | 14691 |
| ASAT\_T | 14691 |
| CK\_T | 14691 |
| CREA\_T | 14691 |
| EOS\_T | 14691 |
| GBIL\_T | 14691 |
| GGT\_T | 14691 |
| LDH\_T | 14691 |
| LIP\_T | 14691 |
| LYM\_T | 14691 |
| PAMY\_T | 14691 |
| WBC\_T | 14691 |

Register transformed variables in the data set. The updated data set with suggested log transformed data sets is save at **data/ADLB\_02.rds**.

Update the IDA analysis plan with the proposed variable transformations. Create a new flag to indicate the selection of predictors including transformations.

### 1.2.4 Comparison of univariate distributions with and without pseudo-log transformation

The comparison is only shown for variables where a transformation is suggested.

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# Appendix A — Source data

The **source** data available in this repository (**DC 2019-0054**) can be located in the data-raw folder. For persistance, the data set is also published on [Zenodo](https://doi.org/10.5281/zenodo.7554815) with the following doi: https://doi.org/10.5281/zenodo.7554815.

The following sections provide a short overview of the data dictionary which accompanies the source data, and a short description of the data.

## A.1 Data dictionary

The data dictionary provides an overview of the collected data. First, we read and display the data dictionary below providing an overview of the collected measurements.

The variable name and label are displayed alongside the measurement scale and units as well as remarks and relevant study information from\_paper.

| variable | label | scale\_of\_measurement | units |
| --- | --- | --- | --- |
| ID | Patient Identification | nominal | 1-14691 |
| SEX | Patient sex | nominal | 1=male, 2=female |
| AGE | Patient Age | continuous | years |
| MCV | Mean corpuscular volume | continuous | pg |
| HGB | Haemoglobin | continuous | G/L |
| HCT | Haematocrit | continuous | % |
| PLT | Blood platelets | continuous | G/L |
| MCH | Mean corpuscular hemoglobin | continuous | fl |
| MCHC | Mean corpuscular hemoglobin concentration | continuous | g/dl |
| RDW | Red blood cell distribution width | continuous | % |
| MPV | Mean platelet volume | continuous | fl |
| LYM | Lymphocytes | continuous | G/L |
| MONO | Monocytes | continuous | G/L |
| EOS | Eosinophils | continuous | G/L |
| BASO | Basophiles | continuous | G/L |
| NT | Normotest | continuous | % |
| APTT | Activated partial thromboplastin time | continuous | sec |
| FIB | Fibrinogen | continuous | mg/dl |
| SODIUM | Sodium | continuous | mmol/L |
| POTASS | Potassium | continuous | mmol/L |
| CA | Calcium | continuous | mmol/L |
| PHOS | Phosphate | continuous | mmol/L |
| MG | Magnesium | continuous | mmol/L |
| CREA | Creatinine | continuous | mg/dl |
| BUN | Blood urea nitrogen | continuous | mg/dl |
| HS | Uric acid | continuous | mg/dl |
| GBIL | Bilirubin | continuous | mg/dl |
| TP | Total protein | continuous | G/L |
| ALB | Albumin | continuous | G/L |
| AMY | Amylase | continuous | U/L |
| PAMY | Pancreas amylase | continuous | U/L |
| LIP | Lipases | continuous | U/L |
| CHE | Cholinesterase | continuous | kU/L |
| AP | Alkaline phosphatase | continuous | U/L |
| ASAT | Aspartate transaminase | continuous | U/L |
| ALAT | Alanin transaminase | continuous | U/L |
| GGT | Gamma-glutamyl transpeptidase | continuous | G/L |
| LDH | Lactate dehydrogenase | continuous | U/L |
| CK | Creatinine kinases | continuous | U/L |
| GLU | Glucoses | continuous | mg/dl |
| TRIG | Triclyceride | continuous | mg/dl |
| CHOL | Cholesterol | continuous | mg/dl |
| CRP | C-reactive protein | continuous | mg/dl |
| BASOR | Basophile ratio | continuous | % |
| EOSR | Eosinophil ratio | continuous | % |
| LYMR | Lymphocyte ratio | continuous | % (mg/dl) |
| MONOR | Monocyte ratio | continuous | % |
| NEU | Neutrophiles | continuous | G/L |
| NEUR | Neutrophile ratio | continuous | % |
| PDW | Platelet distribution width | continuous | % |
| RBC | Red blood count | continuous | T/L |
| WBC | White blood count | continuous | G/L |
| BloodCulture | Blood culture result for bacteremia | nominal | no, yes |

## A.2 Source data

We also display a short snapshot of source data set from the data-raw folder of the project directory. The snapshot provides a glimpse of the data, giving the data dictionary more context.

We do not display all observations measured as it is too wide and long to fit reasonably in to the report. However, we refer you to the [Zenodo page](https://doi.org/10.5281/zenodo.7554815) for an interactive overview of the source data.

Rows: 14,691  
Columns: 53  
$ ID <dbl> 1, 3, 5, 7, 9, 10, 11, 12, 13, 19, 21, 22, 23, 25, 26, 27~  
$ SEX <dbl> 2, 1, 1, 1, 2, 1, 1, 1, 1, 2, 1, 1, 2, 2, 2, 1, 2, 2, 2, ~  
$ AGE <dbl> 62, 72, 46, 84, 38, 68, 55, 55, 67, 52, 47, 29, 59, 51, 4~  
$ MCV <dbl> 99.3, 85.1, 96.3, 91.3, 85.1, 104.5, 99.3, 77.0, 95.3, 83~  
$ HGB <dbl> 11.5, 10.3, 7.4, 10.3, 13.7, 15.7, 14.6, 10.8, 10.9, 10.3~  
$ HCT <dbl> 35.9, 34.7, 22.8, 31.1, 38.7, 46.9, 43.5, 34.8, 30.4, 30.~  
$ PLT <dbl> 307, 182, 64, 309, 183, 144, 242, 38, 88, 105, 216, 188, ~  
$ MCH <dbl> 31.5, 26.0, 31.2, 30.4, 30.2, 34.8, 33.1, 23.8, 33.6, 28.~  
$ MCHC <dbl> 31.8, 30.6, 32.4, 33.3, 35.3, 33.5, 33.4, 30.5, 35.3, 34.~  
$ RDW <dbl> 19.5, 15.0, 19.7, 13.8, 12.6, 13.9, 13.1, 16.8, 13.3, 13.~  
$ MPV <dbl> 10.8, 9.7, 11.1, 8.5, 10.0, 10.9, 10.3, NA, 10.7, 11.3, 1~  
$ LYM <dbl> 0.4, 0.4, 1.5, 1.3, 0.8, 2.2, 2.1, 0.4, 0.4, 0.9, 0.7, 1.~  
$ MONO <dbl> 1.7, 0.2, 1.2, 0.8, 0.4, 0.9, 1.6, 0.1, 0.2, 0.9, 0.6, 0.~  
$ EOS <dbl> 0.0, 0.1, 0.1, 0.0, 0.0, 0.1, 0.3, 0.1, 0.0, 0.3, 0.0, 0.~  
$ BASO <dbl> 0.1, 0.0, 0.1, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.1, 0.1, 0.~  
$ NT <dbl> 86, 90, 58, 67, 95, 61, NA, 93, 57, 69, 108, 86, 93, 83, ~  
$ APTT <dbl> 28.8, 29.8, 36.3, 38.2, 33.1, 41.8, NA, 36.3, 33.8, 28.1,~  
$ FIB <dbl> 578, NA, 313, 487, 490, 400, NA, 413, 431, 407, 604, 476,~  
$ SODIUM <dbl> 137, 141, 147, 141, 137, 141, 139, 142, 143, 136, 131, 13~  
$ POTASS <dbl> 3.88, NA, 4.61, 4.71, NA, 4.41, 3.69, 4.67, 2.35, 3.80, 5~  
$ CA <dbl> 2.29, 2.21, 1.92, 2.05, 2.34, 2.08, NA, 2.31, 2.10, 1.92,~  
$ PHOS <dbl> 1.20, 0.58, 1.51, 2.17, 0.97, 0.99, NA, 1.16, 0.51, 0.72,~  
$ MG <dbl> 0.66, NA, 1.03, 0.83, 0.74, 0.56, NA, 0.87, 0.36, 0.53, 0~  
$ CREA <dbl> 0.65, 0.76, 1.25, 2.78, 0.65, 0.82, 1.21, 1.77, 1.00, 0.5~  
$ BUN <dbl> 5.7, 19.9, 50.6, 47.5, 8.5, 15.3, 13.0, 29.8, 15.0, 14.0,~  
$ HS <dbl> 5.3, NA, NA, 9.7, 3.0, 5.5, NA, 6.2, 4.7, 4.0, 4.0, 4.1, ~  
$ GBIL <dbl> 0.59, 0.48, 8.42, 0.35, 0.42, 2.40, 1.13, 0.45, 1.21, 2.4~  
$ TP <dbl> 67.0, 65.3, 40.5, 61.2, 78.4, 57.5, NA, 70.8, 67.4, 53.8,~  
$ ALB <dbl> 36.7, 37.4, 22.1, 33.2, 43.8, 30.1, NA, 43.6, 35.4, 24.8,~  
$ AMY <dbl> 30, NA, 146, 92, 84, 95, 117, 177, NA, 35, 79, 16, 25, 32~  
$ PAMY <dbl> 16, NA, NA, 28, 50, 57, NA, 43, NA, 35, 63, 14, 15, 20, 3~  
$ LIP <dbl> 10, NA, 89, 18, 50, 25, 73, 30, NA, 38, 52, 19, 14, 26, 5~  
$ CHE <dbl> 5.12, 5.61, 2.52, 4.10, 6.91, 6.79, NA, 7.40, NA, 2.64, 2~  
$ AP <dbl> 85, 80, 119, 94, 108, 68, 51, 153, 239, 146, 180, 64, 74,~  
$ ASAT <dbl> 22, 28, 124, 774, 35, 32, 29, 26, 91, 97, 24, 13, 25, 31,~  
$ ALAT <dbl> 14, 25, 135, 72, 22, 11, 20, 32, 57, 156, 63, 23, 27, 53,~  
$ GGT <dbl> 48, 61, 134, 23, 72, 68, 138, 96, 446, 192, 266, 19, 66, ~  
$ LDH <dbl> 284, NA, 696, 1787, NA, 263, 303, 181, 183, 277, 221, 299~  
$ CK <dbl> 23, 36, 40, 2422, 79, 75, 230, 87, 53, 87, 30, 118, 17, 1~  
$ GLU <dbl> 107, 84, 107, 105, 93, 89, 91, 96, 86, 104, 104, 102, 161~  
$ TRIG <dbl> 105, NA, NA, 134, 152, 85, NA, 129, 62, 207, 292, 221, 12~  
$ CHOL <dbl> 175, NA, NA, 141, 167, 144, NA, 156, 118, 123, 194, 151, ~  
$ CRP <dbl> 3.94, 1.42, 12.09, 3.78, 11.17, 5.89, 17.84, 1.29, 1.36, ~  
$ BASOR <dbl> 0.4132231, 0.0000000, 0.5681818, 0.0000000, 0.0000000, 0.~  
$ EOSR <dbl> 0.0000000, 0.8264463, 0.5681818, 0.0000000, 0.0000000, 1.~  
$ LYMR <dbl> 1.652893, 3.305785, 8.522727, 11.016949, 8.333333, 22.000~  
$ MONOR <dbl> 7.024793, 1.652893, 6.818182, 6.779661, 4.166667, 9.00000~  
$ NEU <dbl> 22.0, 11.4, 14.7, 9.7, 8.4, 6.8, 8.9, 1.2, NA, 3.8, 8.2, ~  
$ NEUR <dbl> 90.90909, 94.21488, 83.52273, 82.20339, 87.50000, 68.0000~  
$ PDW <dbl> 10.6, 11.4, 14.1, 8.7, 12.2, 12.9, 12.5, NA, NA, 13.2, 12~  
$ RBC <dbl> 3.7, 3.9, 2.5, 3.5, 4.4, 4.3, 4.5, 4.7, NA, 3.5, 3.3, 2.5~  
$ WBC <dbl> 24.10, 12.17, 17.45, 11.58, 9.86, 9.94, 13.06, 1.78, NA, ~  
$ BloodCulture <chr> "no", "no", "no", "no", "no", "no", "no", "no", "yes", "n~