# Metadatos PEC1 Análisis de datos ómicos

Tamara Castillo Blanco

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## Metadatos

Se está trabajando con el dataset "human_cachexia.csv". para cargarlo en R, se emplea read.csv("human_cachexia.csv").

```
data <- read.csv("human_cachexia.csv")
head(data)
```

```
##    Patient.ID Muscle.loss X1.6.Anhydro.beta.D.glucose X1.Methylnicotinamide
## 1     PIF_178    cachexic                      40.85                 65.37
## 2     PIF_087    cachexic                      62.18                340.36
## 3     PIF_090    cachexic                     270.43                 64.72
## 4 NETL_005_V1    cachexic                     154.47                 52.98
## 5     PIF_115    cachexic                      22.20                 73.70
## 6     PIF_110    cachexic                     212.72                 31.82
##   X2.Aminobutyrate X2.Hydroxyisobutyrate X2.Oxoglutarate X3.Aminoisobutyrate
## 1            18.73                 26.05           71.52              1480.30
## 2            24.29                 41.68           67.36               116.75
## 3            12.18                 65.37           23.81                14.30
## 4           172.43                 74.44         1199.91               555.57
## 5            15.64                 83.93           33.12                29.67
## 6            18.36                 80.64           47.94                17.46
##   X3.Hydroxybutyrate X3.Hydroxyisovalerate X3.Indoxylsulfate
## 1              56.83                 10.07            566.80
## 2              43.82                 79.84            368.71
## 3               5.64                 23.34            665.14
## 4             175.91                 25.03            411.58
## 5              76.71                 69.41            165.67
## 6              31.82                 35.16            183.09
##   X4.Hydroxyphenylacetate Acetate Acetone Adipate Alanine Asparagine Betaine
## 1                  120.30  126.47    9.49   38.09  314.19     159.17  109.95
## 2                  432.68  212.72   11.82  327.01  871.31     157.59  244.69
## 3                  292.95  314.19    4.44  131.63  464.05      89.12  116.75
## 4                  214.86   37.34  206.44  144.03  589.93     273.14  278.66
## 5                   97.51  407.48   44.26   15.03 1118.79      42.52  391.51
## 6                  132.95   81.45   14.44   25.28  237.46     157.59   66.69
##   Carnitine  Citrate Creatine Creatinine Dimethylamine Ethanolamine Formate
## 1    265.07  3714.50   196.37   16481.60        632.70       645.48  441.42
## 2    120.30  2617.57   212.72   15835.35        607.89       487.85  252.14
## 3     25.03   862.64   221.41   24587.66        735.10       407.48  249.64
## 4    200.34 13629.61    85.63   20952.22       1064.22       820.57  468.72
## 5     84.77   854.06   105.64    6768.26        242.26       365.04  114.43
```

```
## 6     40.04  1958.63   200.34   15677.78        614.00       459.44  314.19
##   Fucose Fumarate Glucose Glutamine Glycine Glycolate Guanidoacetate Hippurate
## 1 336.97     7.69  395.44    871.31 2038.56    685.40         154.47   4582.50
## 2 198.34    18.92 8690.62    601.85 1107.65    651.97         109.95   1737.15
## 3 186.79     7.10 1352.89    301.87  620.17    141.17         183.09   4315.64
## 4 407.48    96.54  862.64   1685.81 5064.45     70.81         102.51    757.48
## 5  26.05    19.69 6836.29    432.68  395.44     26.58          52.98   1152.86
## 6 123.97     5.05  512.86    298.87  482.99    428.38          57.97   3568.85
##   Histidine Hypoxanthine Isoleucine Lactate Leucine Lysine Methylamine
## 1    925.19        97.51       5.58  106.70   42.10 146.94       52.46
## 2    845.56        82.27       8.17  368.71   77.48 284.29       23.57
## 3    284.29       114.43       9.30  749.95   31.50  97.51       18.73
## 4   1043.15       223.63      37.71  368.71  103.54 290.03       48.91
## 5    327.01        66.69      40.04 3640.95  101.49 122.73       27.94
## 6    459.44        62.80       8.17  113.30   28.79 120.30       36.97
##   Methylguanidine N.N.Dimethylglycine O.Acetylcarnitine Pantothenate
## 1            9.97               23.34             52.98        25.79
## 2            7.69               87.36             50.40       186.79
## 3            4.66               24.53              5.58       145.47
## 4          141.17               40.04            254.68        42.52
## 5            5.31               46.06             45.60        74.44
## 6           43.38               24.29             13.46        35.52
##   Pyroglutamate Pyruvate Quinolinate  Serine Succinate Sucrose Tartrate Taurine
## 1        437.03    21.12      165.67  284.29    154.47   45.15    97.51 1919.85
## 2        437.03    36.97       72.97  391.51    244.69  459.44    32.79 1261.43
## 3        713.37    29.37      192.48  295.89    142.59  160.77    16.28 4272.69
## 4        566.80    64.07       86.49 1248.88    144.03  111.05   837.15 1525.38
## 5        184.93    12.30       38.09  206.44     68.72   75.19     4.53  468.72
## 6        432.68    32.79      112.17  387.61     33.45  336.97    24.05 2059.05
##   Threonine Trigonelline Trimethylamine.N.oxide Tryptophan Tyrosine Uracil
## 1    184.93       943.88               2121.76     259.82   290.03 111.05
## 2    198.34       208.51                639.06      83.10   167.34  46.99
## 3    109.95       192.48               1152.86      82.27    60.34  31.50
## 4    376.15       992.27               1450.99     235.10   323.76  30.57
## 5     64.07        86.49                172.43     103.54   142.59  44.26
## 6    105.64       862.64                880.07     239.85   127.74  29.67
##   Valine  Xylose cis.Aconitate myo.Inositol trans.Aconitate pi.Methylhistidine
## 1  86.49   72.24        237.46       135.64           51.94             157.59
## 2 109.95  192.48        333.62       376.15          217.02             307.97
## 3  59.15 2164.62        330.30        86.49           58.56             145.47
## 4 102.51  125.21       1863.11       247.15           75.94             249.64
## 5 160.77  186.79        101.49       749.95           98.49              84.77
## 6  36.97   89.12        287.15       129.02          121.51             399.41
##   tau.Methylhistidine
## 1              160.77
## 2              130.32
## 3               83.93
## 4              254.68
## 5               79.84
## 6               68.72
```

```
dim(data)
```

```
## [1] 77 65
```

Este repositorio de GitHub contiene el análisis metabolómico comparativo entre pacientes con caquexia y pacientes control.

Es un dataset con: - 77 muestras (47 cachexia, 30 control) - 63 metabolitos cuantificados - Variables: Patient_ID, Muscle_loss (cachexic/control), y concentraciones de metabolitos