# Project 23

Data: excel “visit1”

Aim: Create an RTF report.

Operation: Import dataset on SAS. Manipulate the dataset in order to contain information about:

* ID: Patient identifier, it’s the PT CODE followed by the variable idpatient, the last two numbers are taken by their date of birth, the letter F identifies the patient as female otherwise M as male (the first patient’s ID is PT271F)\*
* WEIGHT: weight of each patient. Delete every record with a missing value.
* HEIGHT: height of the patient. Delete every record with a missing value.
* SEX: 0 equal male and 1 equal female
* BMI: calculate the body mass index with the following formula 🡪
* BMICLASS: 1 (underweight) if BMI is under 18.5 kg/m2, 2 (Healthy) from 18.5 to 25, 3 (overweight) from 25 to 30, 4 (obese) over 30.
* BRTHDT: date of birth formatted as “09/12/84”, use the function mdy to create this variable. Check the documentation here:  
  https://documentation.sas.com/?docsetId=lefunctionsref&docsetTarget=p0bo5thbfrcab1n1menkqxq2suiv.htm&docsetVersion=9.4&locale=en
* VISITDT: Date of the medical visit formatted as “05/05/15” use the function mdy to create this variable.
* AGE: age of each patient.
* AGECLASS: create age classes, <=30, 31-40, 41-50, >=50

\*To convert numeric values to character, use the PUT function:

new\_variable = put(original\_variable, format.);

Additional information can be found at the following link: https://support.sas.com/kb/24/590.html

Create a table with mean, sd, median, Q1 and Q3 of the variable BMI for AGECLASS and SEX. Approximate the values to the second decimal. Create a two-way table for AGECLASS and SEX.

Create a report following this structure:

|  |  |  |  |
| --- | --- | --- | --- |
| **Ageclass** | **Sex** | **Statistic** | **BMI** |
| Age <=30 | Male | mean | XX.XX |
|  |  | min | XX.XX |
|  |  | max | XX.XX |
|  | Female | mean | XX.XX |
|  |  | min | XX.XX |
|  |  | max | XX.XX |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Age 31-40 | Male | mean | XX.XX |
|  |  | min | XX.XX |
|  |  | max | XX.XX |
|  | Female | mean | XX.XX |
|  |  | min | XX.XX |
|  |  | max | XX.XX |

Plot a second report selecting only the male patients with more than 60 years and a value of BMI greater than the mean for males. Assign the title “Population at risk of cardiovascular disease”.

Calculate an appropriate statistical test to analyze the relationship between the BMI classes and AGE classes.