MICROSOFT EXCEL BY EXAMPLE II

Requests

1. Copy the data from **Chol_DB.xls** file into a new Microsoft Excel file named **data06_supp.xlsx** and save it in the in **Lab06** folder. Name the sheet as Data.
   The following abbreviations were used in the database:
   Cholesterol = Total Cholesterol (a measure of LDL cholesterol, HDL cholesterol, and other lipid components).
   > **Interpretation:**
   > < 200 mg/dL = Desirable
   > 200 - 239 mg/dL = Mildly High
   > ≥ 240 mg/dL = High

   HDL = HDL cholesterol (Cholesterol which is contained in or bound to high-density lipoproteins (HDL), including CHOLESTEROL ESTERS and free cholesterol, where cholesterol is the principal sterol of all higher animals, distributed in body tissues, especially the brain and spinal cord, and in animal fats and oils.) – It is also called 'good' cholesterol.
   > **Interpretation:**
   > ≥ 60 mg/dL = High; Optimal; associated with lower risk
   > < 40 mg/dL in men = Low; considered a risk factor for heart disease
   > < 50 mg/dL in women = Low; considered a risk factor for heart disease

   LDL = LDL Cholesterol (cholesterol which is contained in or bound to low density lipoproteins (LDL), including CHOLESTEROL ESTERS and free cholesterol) – It is also called 'bad' cholesterol.
   > **Interpretation:**
   > < 100 mg/dL = optimal
   > 100-129 mg/dL = near optimal
   > 130-159 mg/dL = borderline high
   > 160-189 mg/dL = high
   > ≥ 190 mg/dL = very high

   TG = Triglycerides (the form in which most fat is stored in the body – normal value < 150 mg/dL).
   > **Interpretation:**
   > < 150 mg/dL = Normal
   > 150 – 199 mg/dL = Mildly High
   > 200 – 499 mg/dL = High
   > ≥ 500 mg/dL = Very high

2. Insert a new sheet named Descriptive statistics and copy all data in this sheet.
3. Create in the Descriptive statistics sheet a table with all descriptive statistic parameter (as measures of centrality, spread, symmetry and localization). We know that just Height and HDL data are normaly distributed. Using this information, compute for each quantitative variable the proper descriptive statistics parameter.
4. Following previous request, compute the proper descriptive statistics parameters separately for male and female on one hand and for patients from group 1 and respectively 2 on the other hand.
5. Create PIE graphical representation for GENDER and GROUP.
6. Insert a new sheet named Contingency table. Copy in this sheet Group and Gender variables.
7. Create a contingency table for Gender (as row variable) and Group (as column variable). Based on this table create a column chart.
8. Calculate the expected LDL using the following two formulas:

    A.   LDL (mg/dL) [1] = TG – HDL – TG/5

    B.   LDL (mg/dL) [2] = TC/1.19 + TG/1.9 – HDL/1.1 – 38

9.   Based on interpretation values provided above, create for each patient qualitative variables to identify the cardiac risk.

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[1] Friedewald WT, Levy RI, Fredrickson DS.Estimation of the concentration of low-density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. Clin Chem 1972;18(6):499-502.

[2] Ahmadi SA, Boroumand MA, Gohari-Moghaddam K, Tajik P, Dibaj SM. The impact of low serum triglyceride on LDL-cholesterol estimation. Arch Iran Med 2008;11(3):318-21.