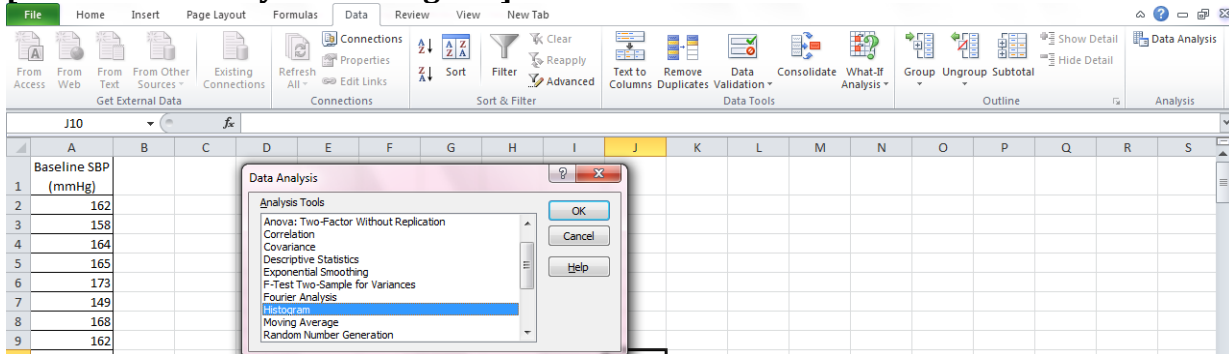


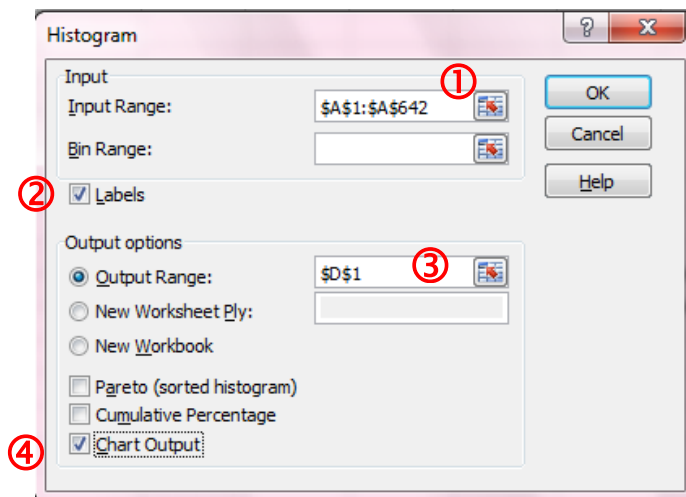
[Data Analysis - Histogram]

- Do not impose any classes of frequency!
- Put the results in a new sheet named Histogram.
- Under the Histogram write if the data looks to follow a normal distribution (symmetry around the mean).

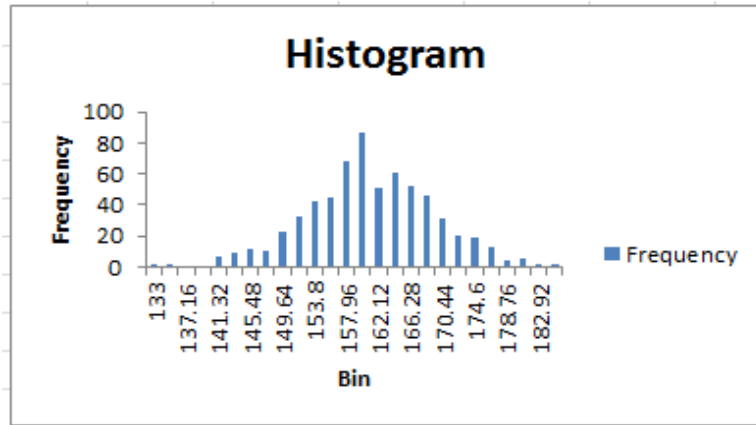
[Data - Data Analysis - Histogram]



1. Select the array of data (e.g. Baseline Systolic blood pressure), including the name of the variable.
2. Activate Labels
3. Display the histogram in the same sheet (e.g. D1)
4. Activate Chart Output option

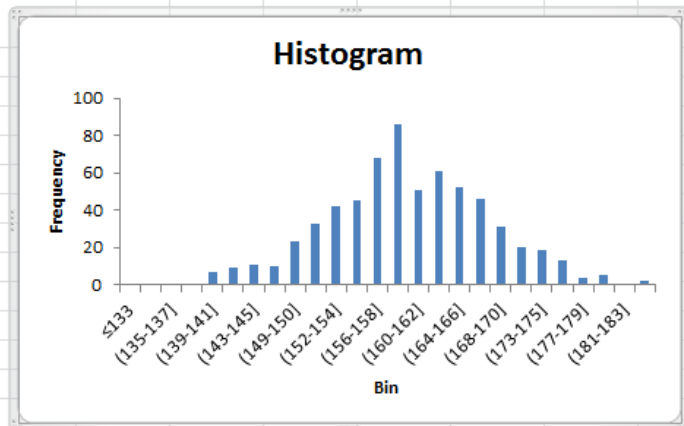


A graphical representation similar with the one bellow will be display:



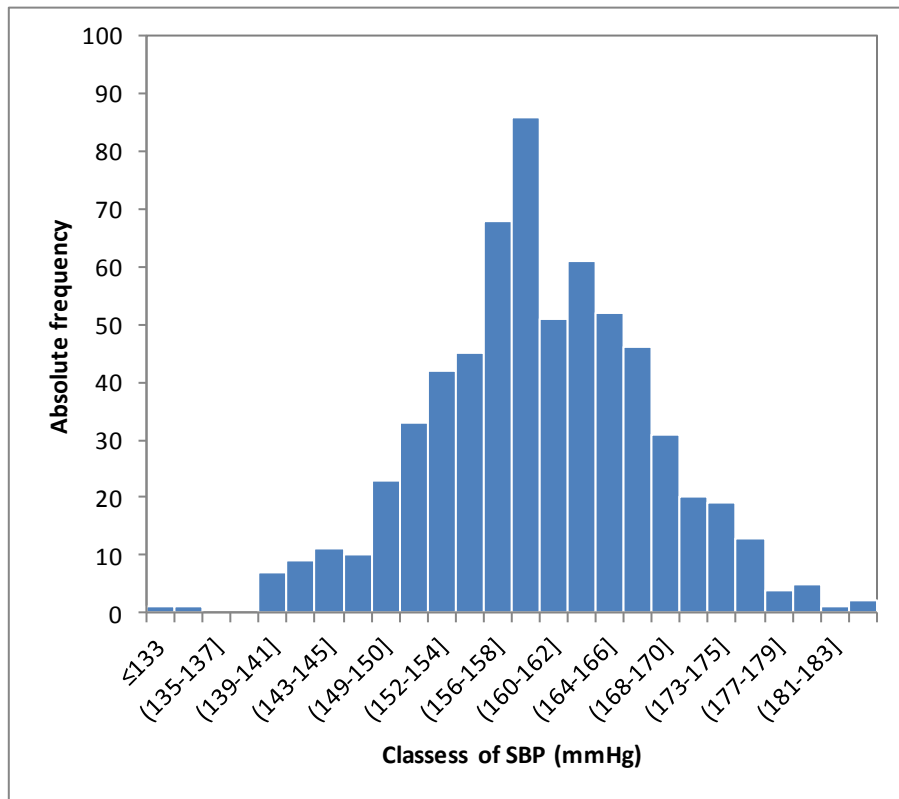
Change the Bin in the frequency table similar with the example bellow:

Bin	Frequency
≤133	1
(133-135]	1
(135-137]	0
(137-139]	0
(139-141]	7
(141-143]	9
(143-145]	11
(145-148]	10
(149-150]	23
(150-152]	33
(152-154]	42
(154-156]	45
(156-158]	68
(158-160]	86
(160-162]	51
(162-164]	61
(164-166]	52
(166-168]	46
(168-170]	31
(170-173]	20
(173-175]	19
(175-177]	13
(177-179]	4
(179-181]	5
(181-183]	1
>183	2



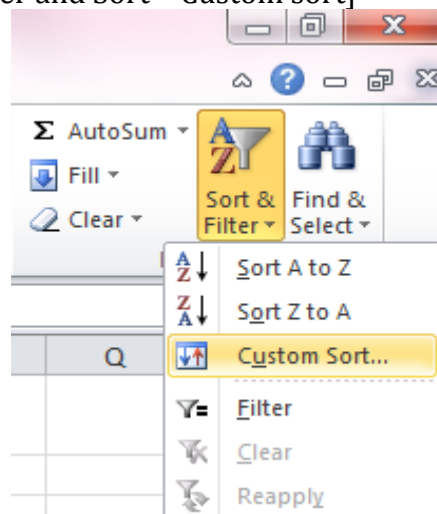
As the values are changed in the Bin column, the same changes will be observed on graphical representation!!!

Work on the graphical representation to look like the one in the image bellow:

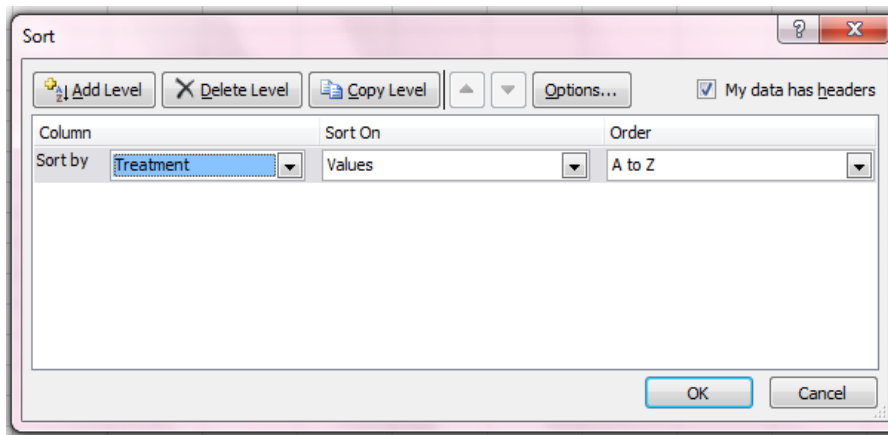


To sort the data

- Select the whole table.
- [Home-Editing-Filter and Sort – Custom sort]



- [... Sort by: Treatment]



One quantitative variable: point estimator (mean) and associated 95% confidence interval

- The predefined function that must be used are presented in the table below:

	Value
Mean (m)	=AVERAGE(array)
Standard deviation (s)	=STDEV(array)
Significance level (α)	0.05
Sample size (n)	=COUNTIF(array, "nebivolol")
t _{critical}	=TINV(α, n-1)
95%CI lower bound	
95%CI upper bound	

- t_{critical}: use the calculated statistics to apply the formula

AVERAGE		X ✓ f _x		=TINV(F4,F5-1)		
	A	B	C	D	E	F
1	Treatment	3months SBP (mmHg)				Value
2	nebivolol	148			Mean (m)	146.23
3	nebivolol	144			Standard deviation (s)	8.24
4	nebivolol	150			Significance level (α)	0.05
5	nebivolol	151			Sample size (n)	427
6	nebivolol	159			t _{critical}	=TINV(F4,F5-1)
7	nebivolol	135			95%CI lower bound	
8	nebivolol	154			95%CI upper bound	

- Calculate the lower and respectively upper bound of confidence intervals using relative cell reference by applying the following formula:

$$\left(m - t_{critical} \times \frac{s}{\sqrt{n}} ; m + t_{critical} \times \frac{s}{\sqrt{n}} \right)$$

=F2-F6*F3/sqrt(F5)			
C	D	E	F
			Value
		Mean (m)	146.23
		Standard deviation (s)	8.24
		Significance level (α)	0.05
		Sample size (n)	427
		t _{critical}	1.97
		95%CI lower bound	=F2-F6*F3/sqrt(F5)
		95%CI upper bound	

- Concatenate the confidence interval associated to the mean using the predefined function named CONCATENATE:

$$=CONCATENATE("[",ROUND(F1,2),";" ROUND(G1,2),"]")$$

where F1 is the relative cell reference for the 95%CI lower bound, and G1 is the relative cell reference for the 95%CI upper bound.

F10		fx =CONCATENATE("[",ROUND(F7,0),"-",ROUND(F8,0),"]")				
	A	B	C	D	E	F
1	Treatment	3months SBP (mmHg)				Value
2	nebivolol	148			Mean (m)	146
3	nebivolol	144			Standard deviation (s)	8.24
4	nebivolol	150			Significance level (α)	0.05
5	nebivolol	151			Sample size (n)	427
6	nebivolol	159			$t_{critical}$	1.97
7	nebivolol	135			95%CI lower bound	145.45
8	nebivolol	154			95%CI upper bound	147.02
9	nebivolol	148				
10	nebivolol	140			95%CI	[145-147]