Results Chapter

- In results chapter, all findings of laboratory or clinical investigations are reports objectively.
- It consists of text, tables and figures which should be concise, avoid interpretation, and report the data necessary to prove or disprove the study's hypothesis.
- This chapter should follow a logical order which could be one of the options presented in the following table:

Options for data presentation order*
1- Chronological order
2- Grouping by topics or experiment
3- General to specific
4- Most to least important

Chronological order: the most straightforward order when the data presented in a sequential subheadings similar to that presented previously in the method chapter.

It is the easier order to be followed by the reader to go back to the methods associated with the given result.

Topic/ study group or experiment/ measured parameter:

Example: a comparison study of the sealing ability, antimicrobial, cytotoxicity and bioactivity of 3 root filling materials.

If the results grouped by the type of root filling material it will be:

1st material: sealing ability, antimicrobial, cytotoxicity and bioactivity.

2nd material: sealing ability, antimicrobial, cytotoxicity and bioactivity.

3rd material: sealing ability, antimicrobial, cytotoxicity and bioactivity.

This order allow the reader to identify the results of each material as a full package of information.

If the results grouped by measured parameter it will be:

Sealing ability: 1st material, 2nd material, 3rd material.

Antimicrobial: 1st material, 2nd material, 3rd material.

Cytotoxicity: 1st material, 2nd material, 3rd material.

Bioactivity: 1st material, 2nd material, 3rd material.

This order emphasis directly on the similarity or difference between the different root filling materials in each tested parameter.

General to specific style:

This style of results is most commonly used in clinical studies including multiplegroups of patients receiving different treatments.

The characteristics of overall population, such as sex andage distribution, initial and final numbers in each groups, and dropouts are first introduced.

After that, the data and results of each specific group is presented, starting with the control group or the group receiving the standard treatment followed by the results for the diseased group or the group receiving the experimental treatment.

Most to least important style:

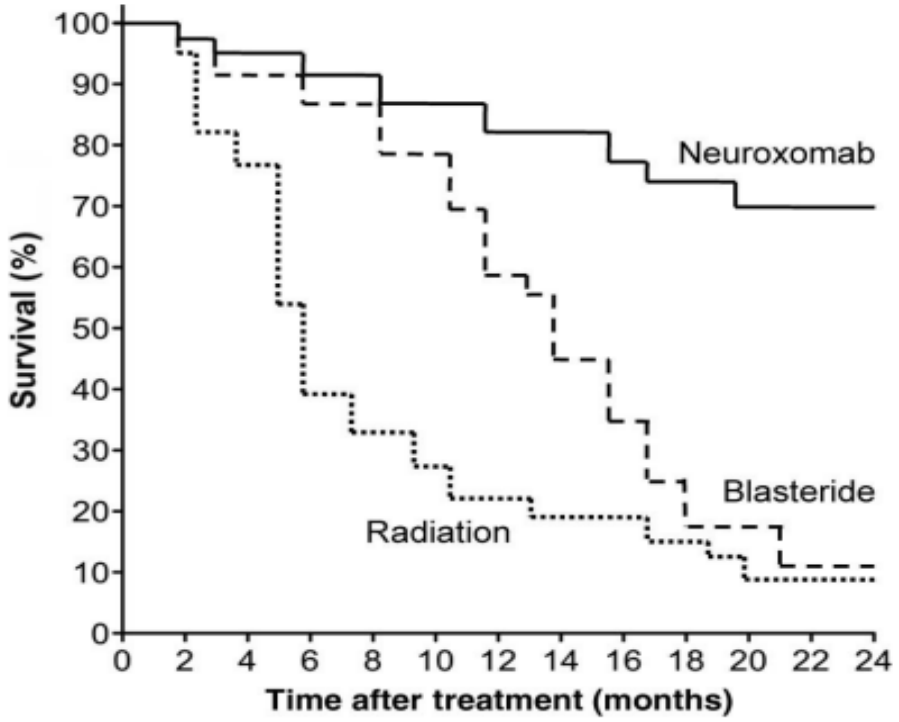
If the order of the results is not critical in your study, presenting the results from most to least important starting with the highlighting the results that you want to emphasise.

Data and results are not the same:

Data are facts and numbers presented in tables and figures as raw data or summarised data (mean, median, standard deviation).

Results are the statements in the main text that summarising and explaining the what the data show.

Two-year survival rate of patients with neuroblastoma treated with Neuroxo-mab, Blasteride and radiation.



Time, months	Survival, %		
	Neuroxomab	Blasteride	Radiation
6	95[a,b]	91[a]	39
12	83[a,c]	69[a]	23
18	74[a,d]	17[e]	15
24	70[a,d]	11[e]	9

[a] $P < 0.001$ vs radiation group.
[b] $P = 0.56$ vs Blasteride.
[c] $P = 0.031$ vs Blasteride.
[d] $P < 0.001$ vs Blasteride.
[e] Not significant vs radiation group.

Figure and table 1 shows the survival rates following diagnosis and initiation of treatment in the 3 treatment groups. At 6 months the survival rates were 95% for the Neuroxomab group, 91% for the Blasteride group, and 39% for the radiation-treated group. At 12 months the rates were 83%, 69%, and 23%;, at 18 months 74%, 17%, and 15%; and at 24 months were 70%, 11%, and 9%.

Parag. 1 shows data but not results. What do the data show? what is the point of presenting these data? Where is the statistical differences present?

Figure and table 1 shows the survival rates following diagnosis and initiation of treatment in the 3 treatment groups. At 6 months the survival rates were significantly higher in the Neuroxomab and Blasteride treatment groups compared with the radiation-treatment group. At 12, 18, and 24 months the survival rates in the Neuroxomab group exceeded those of both the Blasteride and radiationtreatment groups.

Parag. 2 presents results but not data. It is clear in the figure that the survival rate of Neuroxom-ab and Blasteride were higher than radiation, but what is the level of significance of any difference?

The Text:

- The results should first describe the subjects studied, including those who enrolled but were not included or withdrew from the study. Also reasons should be provided for this exclusion to add justification of the non-bias method in sample selection. The final population included in the analysis should be clearly stated.

Results

One hundred subjects participated in this study, each diagnosed with a mandibular first or second molar with IP. Of these, 1 patient did not show profound lip numbness at 15 minutes after the initial IANB ("missed" block) and was excluded from further data analysis.

There were 199 subjects in the combined sample, 98 first molars and 101 second molars. The mean age in the combined sample was

Shapiro M. etal 2018. Efficacy of articaine versus lidocaine in supplemental infiltration for mandibular first versus second molars with irreversible pulpitis: a prospective, randomized, double-blind clinical trial. *JOE; 44 (4): 523-8.*

- Be concise and emphasise important findings.
- Do not repeat information provided in tables but highlight the important finding and compare between them.
- The results chapter typically should not include references.
- Avoid excessive use of abbreviation which may confuse the reader.
- Begin each paragraph with a topic sentence that gives the reader information about the set of data that will be revealed. Then the rest of paragraph can be a summary of the data by referring to the table or figure where the data can be found.
- It is preferable to provide the results that answer the studies hypothesis or the primary outcome before addressing the secondary outcomes.

- Usually data are summarised (e.g. mean or median values for normal or non-normal distribution, respectively). The variability of the results must be included as standard deviation or standard error for the normally distributed and interquartile range for non-normally distributed data.
- Check the consistency of numerical results between different sections of the your manuscript such as the abstract, tables/figures and the discussion section.
- Avoid writing (highly significant and very high significant) in comparing between groups. Instead mention the *P*-value present between groups.
- The past tense is used in the results chapter.
- The numerical relation between data is suitable to be mentioned in the results chapter, while its interpretation, correlations, and implications should be kept for the discussion chapter.

The Tables:

- Make tables easy to read and follow. Tables also should be kept to the minimum necessary to answer the study hypothesis. Avoid repeating data in subsequent tables and figures.
- Avoid including the whole statistical tables, such as ANOVA test table, when the numbers in this table is not interesting to you or to your text description. These numbers is very confusing to the reader. Instead mention only the *P*-value which is the most important.

ANOVA table shows lots of statistical information but the last column is the important which illustrate the *P*-value.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
M density	Between Groups	23.759	5	4.752	21.857	.000
	Within Groups	4.348	20	.217		
	Total	28.107	25			
D density	Between Groups	52.887	5	10.577	95.546	.000
	Within Groups	2.214	20	.111		
	Total	55.102	25			
T density	Between Groups	26.849	5	5.370	93.957	.000
	Within Groups	1.143	20	.057		
	Total	27.992	25			

- Tables should be used not only to present data but also to show relationships. Therefore, you should not use a series of information in a table, in which the content of one cell has no relation to the content of the adjacent cell.
- Provide a concise title and legend that summarises the content of the table. This should be presented at the top oftable.
- Provide definitions of each abbreviation in the table legend orfootnote so the reader does not have to refer to the text.
- Tables should be numberedin the order that they appear in the text.

TABLE 1. Percentage Differences (pre- and postpreparation) in the Transportation of Mesiolingual and Mesiobuccal Canals (mean ± standard deviation) per Thirds and per Groups

	Group			
Third	PFWO	SXWO	WO	*P* value
Mesiobuccal canals				
Cervical	22.5 ± 11.5^{a}	23.8 ± 14.6^{b}	19.0 ± 18.0^{c}	>.05
Middle	14.0 ± 13.0^{a}	14.3 ± 13.7^{b}	$27.0 \pm 12.5^{a,b}$	<.05*
Apical	-5.3 ± 11.6^{a}	-6.8 ± 4.9^{b}	-3.1 ± 7.3^{c}	>.05
Mesiolingual canals				
Cervical	28.9 ± 14.1^{a}	25.5 ± 12.5^{b}	20.1 ± 17.6^{c}	>.05
Middle	15.4 ± 16.3^{a}	18.6 ± 15.8^{b}	19.2 ± 10.1^{c}	>.05
Apical	-4.9 ± 10.2^{a}	6.7 ± 5.5^{b}	-4.0 ± 13.5^{c}	>.05

PFWO, PathFile before WaveOne Primary; SXWO, ProTaper Universal SX before WaveOne Primary; WO, WaveOne Primary.

Equal letters indicate a statistically significant difference. Positive values indicate distal transportation; negative values indicate mesial transportation.

*PFWO × SXWO: $P = > .05$; PFWO × WO: $P < .05$; SXWO × WO: $P < .05$.

- The first column typically list the independent variable in rows with subsequent columns presenting the dependant variables.

The independent variables are those who are manipulated or changed by the investigator. The dependant variables are the tested or measured variables by the experiment and their values depends on the independent variables.

Example: one may study serum phenytoin concentration versus prescribed dose. The dose is the independent variable and the resulting serum concentration is the dependent variable because it depends on (or is caused by) a change in the independent variable. Think of it as asking a question: Does changing the dose (cause) result in a change in the circulating phenytoin concentration (effect)? This way of identifying a cause and effect relationship may often help you to determine whether the study involves independent and dependent variables.

- Provide the actual *P*-value rather than terms such as '*P* = NS'.
- More detailed comparison such as paired comparison tests required separate table to list all *P*-values.
- Provide units for each measurement, preferably within the row headings of each column.

The Figures:

- Figures are type of visual displaying of the results which help the reader to interpret these results. Therefore, ensure that all information required is presented such as labelling axes correctly and completely. Avoid using unnecessarily ornament (e.g. do not use three-dimensional bars on a two-dimensional graph).
- Use specialised programmes to create graphs (e.g. Prism and SigmaPlot) rather than a simple spreadsheets.
- If using colours in graphs, keep the white background, and avoid yellow and other colours that are difficult to see.
- Keep axes line black and not less than 0.25 pt.
- Figures should be numbered in the order that they appear in the text.

- Provide a legend for the figure that should appear at the bottom of the figure. The legend should start with the figure number, title, then a description for data and all notations. Therefore, each figure should stand alone, and the reader should not have to refer to the text to interpret data.
- The variables presented on the x-axis are the independent variables, while the y-axis is used to plot the dependant variables which usually represent only one variable.

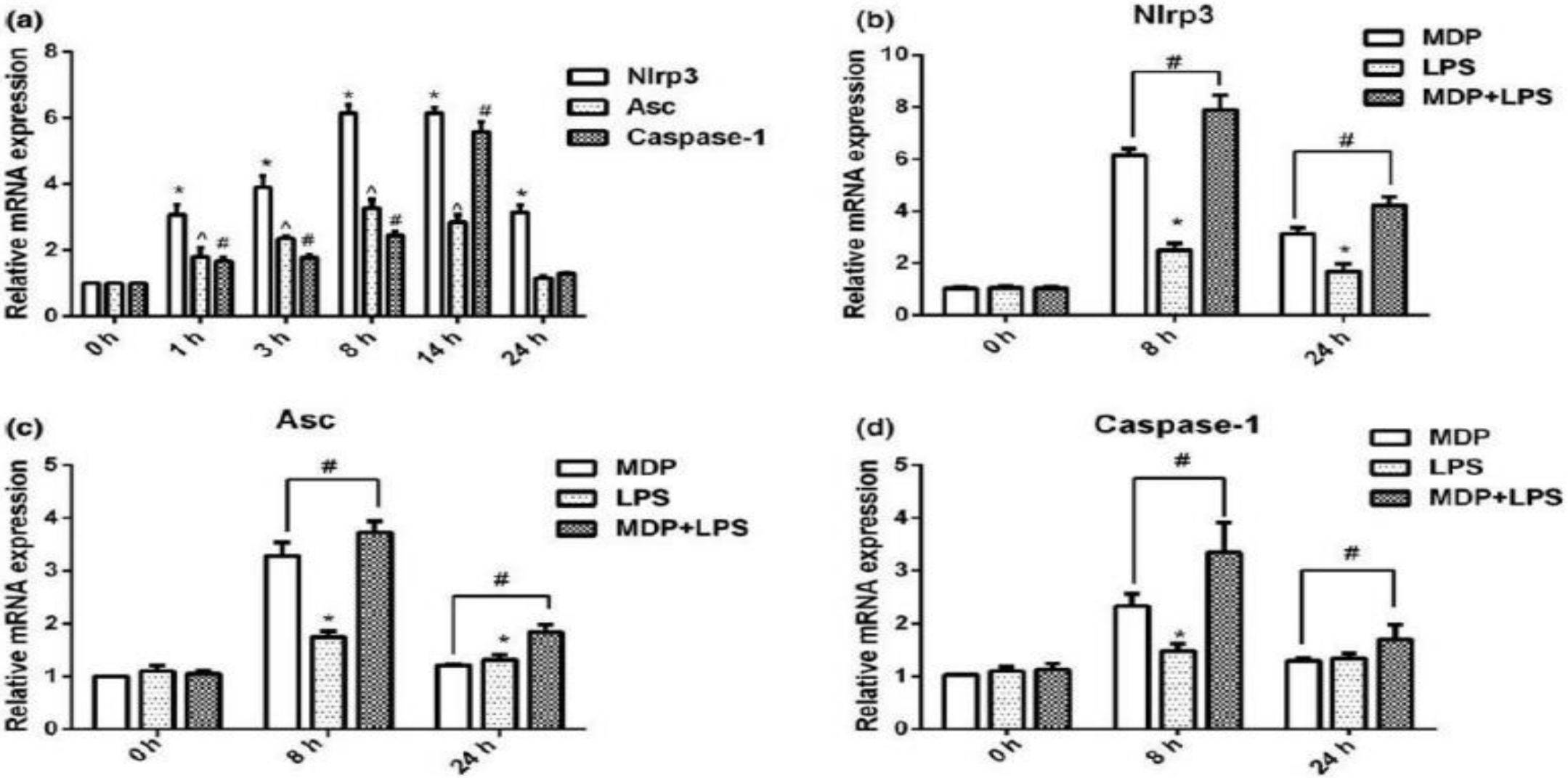


Figure 4 Effect of MDP and LPS on the expression of NLRP3, ASC and caspase-1. HPDLFs were stimulated with MDP (10 μg mL^{-1}) for 0, 1, 3, 8, 14 and 24 h. Gene expression of NLRP3, ASC and caspase-1 was examined by RT-PCR (a) (*^#$P < 0.05$ versus control). HPDLFs were stimulated with MDP (10 μg mL^{-1}), LPS (0.5 μg mL^{-1}) or MDP combined with LPS for 8 and 24 h. Gene expression levels of NLRP3 (b), ASC (c) and caspase-1 (d) were determined by RT-PCR (*$P < 0.05$ versus control, #$P < 0.05$ versus MDP stimulation).

Thank you