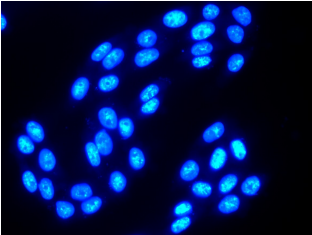


3 Essential steps for better data visualizations

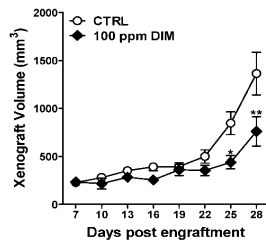
1 Use the right kind of plot for your data

Picture



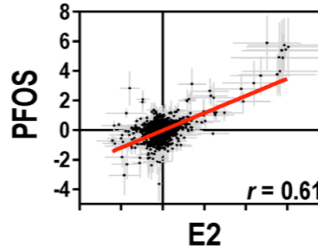
Define features in image and in legend

Line Graph



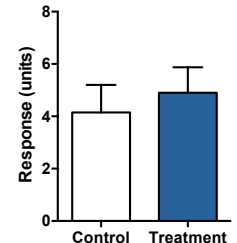
Use for data with one continuous variable

Scatter Plot



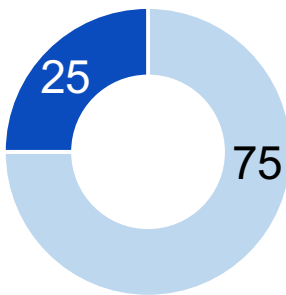
Use for XY coordinate data; indicate best fit line

Bar Chart



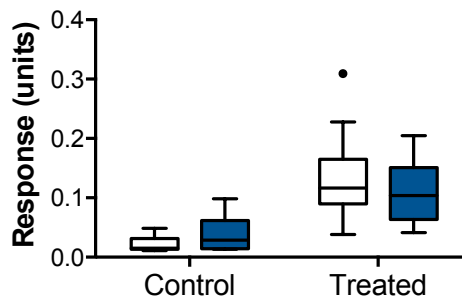
Use for categorical data; vertical orientation preferred

Proportional Chart



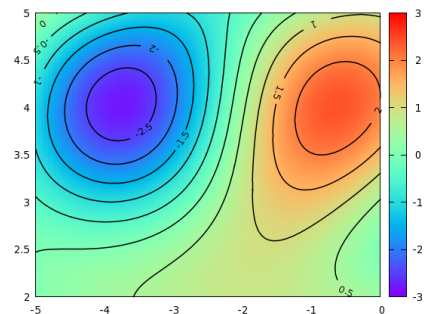
Parts of a whole; best with only a few groups

Box & Whisker Plot



Useful to highlight population differences, identify possible outliers

Contour Plot



Useful for multi-dimensional data; very effective with color

2 Figures should elucidate information, not obfuscate



Do not manipulate figure to (de)emphasize observations



Do not arbitrarily exclude data or change analysis plan post-hoc



Use the same scale for similar data sets



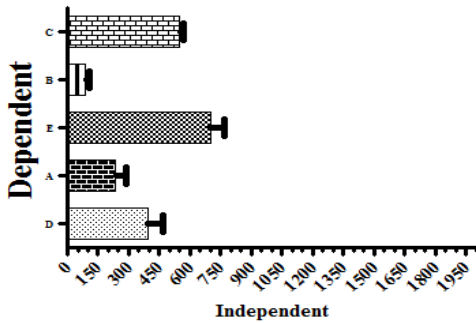
Graph style should reflect experiment design

3

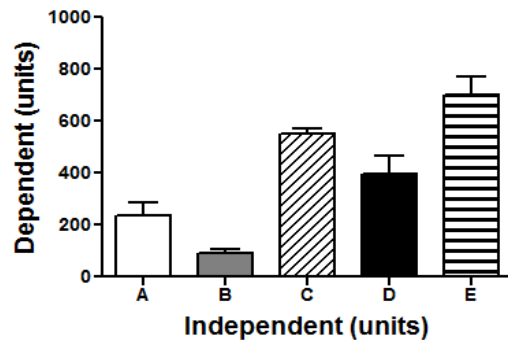
Apply principles of effective formatting

- Neatness** Image is clean and sharp, invites attention
- Readability** Eye can discern important information easily, quickly
- Font** Text is large enough to be read, placed well and limited
- Size** Graph is sized appropriately for anticipated reduction during printing
- Aesthetics** Balanced graphs, good use of white space, eyes drawn to most important features
- Use of color** Distinguishes important content, pleasing to eye
- Consistency** Similar graphs have same stylistic scheme (line width, font type and size, labeling, scales, etc.)

Not this:



This!

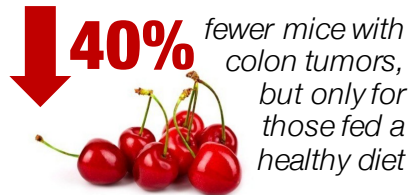


?

Can I use trendy infographics?

Excellent tool for distilling information to simple image

Tart cherry supplemented diet



Use for public presentations, but not professional journals

?

What software is recommended?

Avoid Excel for data charts; too difficult to achieve needed consistency

Recommend GraphPad Prism

www.graphpad.com



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Complete PDF of presentation available

<https://usu.box.com/s/9blhgdocmzf15b7piw9p7yrfzydwjeh>