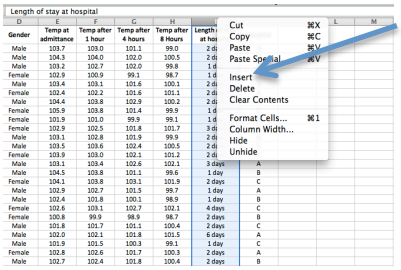
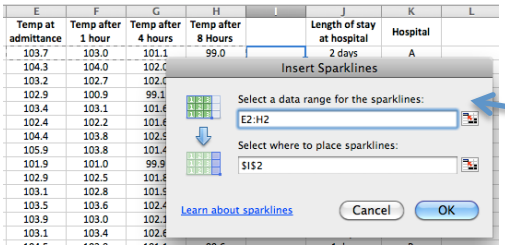
Locate the '2 sparklines, filter, linking' data set. In this lesson we will learn about sparklines, filtering data, and inserting and linking worksheets. Sparklines are a great tool for a small, quick view of the trend of data. Filtering data is a lot like sorting, however it displays only the data that satisfies the condition. And inserting worksheets allows for multiple woksheets in the same file.

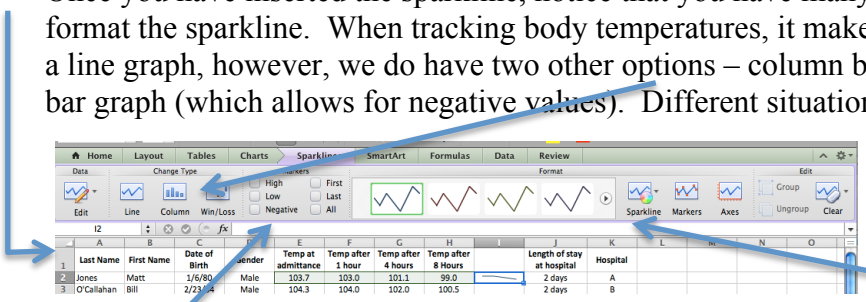


Inserting a Column:
Unlike other graphs, sparklines appear in a single cell. Lets use sparklines to view the patients' temperatures over time, so we should insert a column following the most recent temp, before the length of stay information. Right click on column I, and insert a column by selecting *Insert*.

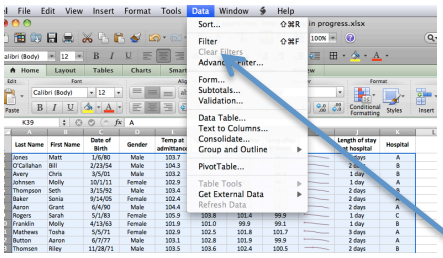


Inserting a Sparkline:
Select the new blank cell for the first patient (cell I2). Select *Insert* from the top menu and select *Sparklines…* the sparkline menu will appear asking for the range of data for the sparkline. Click and drag from the temperature at admittance to the temperature after 8 hours and click "ok". We may copy the sparkline just as we can formula, by hovering our mouse over the bottom right hand corner until we get the bold cross and then dragging it to all the cells below, which we would like the sparkline to appear.
Note: This must be oriented vertically or horizontally from the cell that you would like the sparkline to appear.

Formatting a Sparkline:
Once you have inserted the sparkline, notice that you have many options for how to format the sparkline. When tracking body temperatures, it makes most sense to keep it as a line graph, however, we do have two other options – column bar graphs, and a win/loss bar graph (which allows for negative values). Different situations may lend themselves to different graphs being more beneficial.



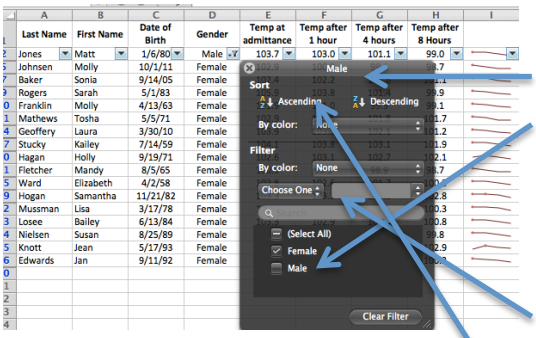
Regardless of the type of sparkline, you may change the color, or add in markers, to point out particular values (smallest, largest, average, first, last, or all). Lets mark ours with the largest value. Notice the largest temperature is now marked with a dot on the sparkline. Feel free to choose any color of your choosing.
Note: formatting a change in one sparkline will apply to all sparklines in the column.



Filtering data:

Select all the data that you would like to sort (omitting the column titles). Click the entry in one corner, and then drag to the opposite corner. **Hint**: in large data sets, start in the bottom right corner and drag to the top left corner. Once the data is selected, the process is similar to sorting the data. Go to *Data* in the top menu and choose *Filter*. You'll notice the top cell in each column now has a drop down menu attached. These drop down menus will allow you to filter the data so you can see smaller portions, that satisfy a given condition. For example, if you would like to only see the Female patients, click the drop down arrow on that cell, and the filter menu will appear. At the bottom, you may uncheck "male" so only the female patients data will be visible. Once you are finished viewing the filtered data, you may click "*Clear Filter*" and the entire data set will again be visible. Now choose the birthdate column's filter menu. If we're only interested in viewing the patients who were born after 2003, we may choose "After" and then type in "12/31/2002" in.

Last Name	First Name	Date of Birth	Gender	Temp at admittance	Temp after 1 hour	Temp after 4 hours	Temp after 8 Hours	Length of stay at hospital	Hospital
Jones	Matt	1/6/80	Male	103.7	103.0	101.1	99.0	2 days	A
O'Callahan	Bill	2/23/54	Male	104.3	104.0	102.0	100.5	2 days	B



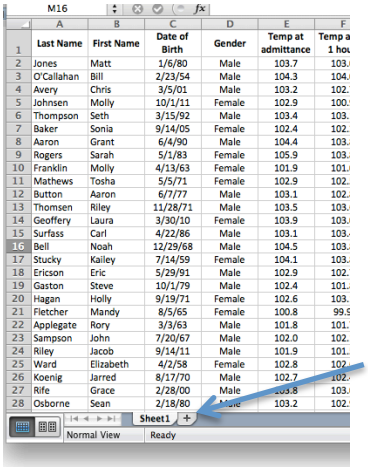
Notice you may also sort the data from the filter menu.

Note: You may filter data from multiple columns at the same time. Perhaps you want to see all male patients who came in with a temperature at admission that was over 102 at Hospital A. Just make sure when you're finished you go back and click "*Clear Filter*" for each column to get the full data set back to being viewable.

Other Note: Even if you save a spreadsheet with a filter on, the entire data set is still retrieveable if you turn the filter off.

Removing a Filter Completely:

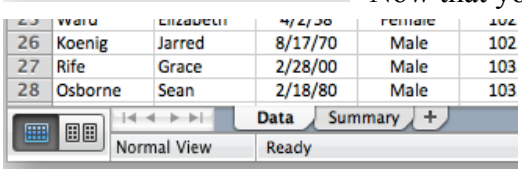
If you want to completely turn off the filter, select the data set (or at least the top cells where the drop-down arros are located, go back to *Data* in the top menu and click *Fliter* (the checkmark in this menu means it is turned on, no checkmark means there is no filter turned on).



Inserting a Worksheet:

Excel will allow you to have multiple worksheets in the same file (workbook). This is great for times that you'd like to keep data from different groups sepearte, but still allows them to be in the same file. Another reason to use a separate worksheet might be keep summaries away from messy looking data, and you can do this because Excel will allow you to "link" the worksheets (that is, you may refer to different workshees when typing formulas).

To insert a worksheet, click the plus sign next to "Sheet1" on the formula sheet.

Renaming a worksheet:

Now that you've created another worksheet, it might be nice to name them. Double click the current names one at a time, and type to rename them to "Data" and "Summary."