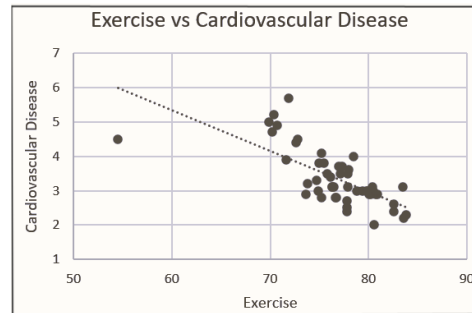


#### 4.4) INSTRUCTOR’S GUIDE TO U.S. RISK FACTORS AND HEALTH OUTCOMES

**Overview:** Puerto Rico, Guam, and the Virgin Islands often show up as outliers with the rest of the U.S. If you choose not to delete them, you may consider using them as the basis for discussing why they are outliers. The graph below excludes Guam and the Virgin Islands, but does include Puerto Rico, which is the outlier in the left of the line. This implies that Puerto Rico has a lower than predicted rate of cardiovascular disease.



#### Cancer Rates

	Melanoma	Myeloma	Prostate	Fem. Breast	Liver
Asian or Pacific Is.	1.4	3.8	70	92	12.1
Black or Afr. Amer.	1.0	12.9	209	122	8.6
White	23.2	5.8	127	128	5.6

**Answers to Questions:** 1) There is no evidence that smoking causes obesity. This correlation might be attributed to poor people being disproportionately represented among those who either smoke, are overweight, or both. 2) Asians: liver cancer, Blacks: myeloma and prostate cancers, Whites: melanoma 3) Chronic conditions are more likely to be overrepresented in states with more elderly people if you fail to compensate for age. 4) Reports of vaccine-attributed deaths increased 135X in 2021. 5) COVID vaccines became available in 2021. 6) Yes. 7) No. 8) Babies were not vaccinated for COVID in 2021.

**Logistics:** The CDC website is somewhat cumbersome, so you should navigate it on your own *before* you give the instructions to your students so that you can answer their questions and make revisions to the instructions in the event that changes were made to the website. If your students are not up to the task of gathering all the data themselves, you may provide it to them ready-made from the file on your disk and let them use it to make graphs. I do not recommend doing this unless students spend some time navigating the CDC website so they at least become familiar with the website. *Make sure to delete all graphs on “sheet 2” of the file in the event you choose to provide it to your students.*

**Degree of Difficulty:** 2—Not all students might be proficient with spreadsheets, so you may want to teach a few key students how to make scatter plots. These students can in turn teach everyone else.