This paper was retracted for both scientific fraud:-

- failure to disclose financial interest, including being paid by lawyers to produce scientific data supporting a vaccine syndrome;

- data in paper that does not match medical records of these patients;

- falsely reporting that they selected consecutive patients for study when they were actively selecting patients that supported their hypothesis

- falsely reporting that parents reported behavioral problems in children AFTER MMR vaccination when medical records show reports PRIOR to vaccinations.

and ethical concerns:-

- unnecessary medical procedures on patients including spinal taps;

- filed patent for alternative measles vaccine before publishing report.

- no prior approval by ethic boards to conduct research;

- no qualification to conduct the research;

-paying children to have their blood drawn during son’s birthday party.

On these grounds, the paper was retracted and the study is thoroughly discredited. Wakefield is also no longer allowed to practice medicine.

Furthermore, countless other studies have shown that there is no association between MMR and autism.

This paper is oftentimes used as ‘proof’ that vaccination is linked to autism. Aside from the overwhelming evidence above, let’s examine if it actually offers evidence of such an association. Here, we will use some of the skills we have learned in the previous exercise to examine the data reported in the paper.

What is the title of the paper?

Using google, define hyperplasia and colitis.

Does the title of the paper mention vaccination?

Read the summary. What are the associations that this paper is seeking to show? (Hint: it’s more than two things).

What is the total sample size in the paper to show these associations?

Based on what you have learned, do you think this sample size is big enough to vigorously test these associations?

Let us look at one of these associations. Let’s say you are interested in looking at the association between MMR vaccination and autism.

Out of the 12 patients in this study, how many had MMR vaccinations (table 2)?

How many of the study participants were diagnosed with autism or display behavioral problems?

If you were interested in studying association between autism and MMR vaccinations, is this an appropriate data set? Is this a controlled study? What groups of patients are missing to have this be a controlled study?

Ultimately, even without the scientific fraud and ethical violations, did the authors present scientific evidence that supports the hypothesis that ASD is linked to MMR vaccination? Did they provide evidence that MMR vaccination CAUSES ASD?