This is a critic about the study “Contrast-Induced Acute Kidney Injury Among Patients With Chronic Kidney Disease Undergoing Imaging Studies: A meta-Analysis” This is a study by four Chinese doctors namely Yen-Chien Lee, Chung-Cheng Hsieh, Ting-Tsung Chang, and Chung-Yi Li, each of them are affiliated to different organizations This article or research study from the American Journal of Roentgenology. The American Journal of Roentgenology (AJR) is a highly praised monthly journal with a large number of world-wide circulation. The AJR, published by the American Roentgen Ray Society, is founded during the 1990s, making it the first radiology society in the US. The journal to be criticized is from the October 2019 edition of the AJR specifically volume 213 number 4. The study is classified under the special articles section and is an original research. The study’s abstract talks about patients with chronic kidney disease or CKD can acquire contrast-induced nephropathy or CIN through undergoing contrast-enhanced imaging. The objective of their study is to determine the probable chance of acquiring CIN caused by IV contrast medium or CM. To achieve their objective, they performed a meta-analysis. According to another study by Hippokratia (2010), meta-analysis is a quantitative research design used to systematically asses previous studies to find conclusions about a certain research or study. In the formulation of the research idea, it was because of the increasing cases of CIN in patients who have CKD. It was stated that patients with normal renal function is deemed safe from the CM. They drew their hypothesis of linking CIN in CM because of the improper control group of patients with renal function. The researchers themselves do not know what the cause of it is, but with the current evidences that they had in their disposal, they are determined to draw conclusions. Their approach on the meta-analysis comes in the form of researching PubMed and MEDLINE articles that were published up until the 3rd of October 2018. They researched articles containing the phrase “contrast medium” or “contrast media”. Aside from their meta-analysis they also included CKD patients. The researchers only reviewed studies that specifically used an IV route of contrast medium. From the different studies that they have gathered, they only used six studies, along with the patients with CKD. According to the study, IV infusion of CM did not lead to the deterioration of renal function in patients with CKD compared to the patients without CKD. In their conclusion, it shows that through the meta-analysis, and their own experiments, IV radiographic CM has not been able to do renal damage to patients with CKD present.

Consulting the guide questions for the criticism of the paper, the study itself has presented a lot of data from previous researches. It stayed on relevant topics and did not stray from the other references or sources. This shows the consistency of the researchers in terms of them defining the scope and limitations of their study. They also widened their scope of the researches they acquired for the meta-analysis. In regards to their research title, though they did state in the study that aside from the meta-analysis, they recruited at least 55,900 patience to test. The title was clear and straightforward but it did cover the side of the study where they used participants. In regards to abstract of the study, it is long but conveyed the necessary information. It was lengthy due to the explanation of how or what their results showed in their experimental portion of the study. They stated in their conclusion the phrase “Retroactive cohort studies”, this of course implies the past studies and the related literature used in the study. Though they did not put or state their actual findings from the experiment that they made, it showed in the results of their experiments. With their introduction, the intention of the article was made clear, aside from the definition of the certain disease or illness abbreviations, the reason why the introduction was made clear is because of them stating their goals and objectives clearly. In the discussions, their materials and methods, and their results showed that all the data that they have and the discussion is relevant. With each data taken from the previous studies as the basis for the discussions. Most of the study’s sections are clearly expanded upon, with each data interpreted clearly, terms and values defined. Though one can get lost in some statements of the author, with enough knowledge of the topic, a student under this subject would understand. The authors or the researches have been objective when it comes to their discussions of the topic.

All in all the study can be deemed really relevant in today’s time. With their conclusion being that there is a small chance or none in terms of developing CIN in CKD patients undergoing CT scans. Though this does not figure out the real cause of CIN among patients, it does debunk the idea that CIN is cause by IV CMs. This study can be used also as literature for future researches in regards to CIN and CKD. It is possible that the case of acquiring CIN can be eliminated due to the advancement of today’s technology, with each advancement, tools used for these diagnosis become safer and most importantly, more accurate. With the current state of our technology, there is possibility of errors, though it can still be chalked up to the use of technology, in the probable near future, there might be no need of total supervision. It is really possible that in the near future, because of this research, the goal in determining the exact reason why CIN exist can be found. It really challenges the established idea that CIN is caused by IV CN. Though the study is more inclined to the meta-analysis more than the actual experiment of the researchers, it still proved their ideas that there might have not been a connection between the CIN of CKD patients to the use of CT or IV CN scans.