Is it possible that zebra fish can make human biology even clearer? Zebrafish are similar to humans, and they are also good models for human disease. Researchers view internal organs and observe diseases like tumor growth or engraftment of bone-marrow transplants in a living organism. The source does compare to the introduction. The source is stating that zebrafish allows scientists to directly view its internal organs. “Zebrafish embryos have enabled researchers to study disease in live organisms, since they are transparent. But zebrafish adults are opaque. Everything after four weeks has been visible to us.” **(**White, Richard, MD, PhD) “The impacts this research could have on society is how cancer spreads. His experiment on the zebrafish examined how cancer spreads. “The process by which a tumor goes from being localized to widespread and ultimately fatal is the most vexing problem that oncologists face.” We don’t know why cancer cells decide to move away from their primary site to other parts in the body.” **(**White, Richard, MD, PhD) There isn’t mentioning of being a part of a University or Government nor affiliation with for-profit corporation. Hypothetically speaking if they were with a for-profit institution such as a pharmaceutical company, it wouldn’t change my view of the study and its conclusion. I believe cancer is something that pharmaceutical companies would invest putting money into research to find a cure. I feel they would think they would be making just as much money if not more. Cancer is something that nobody has found a cure for, and pharmaceutical companies would love to be a part of that and sadly make a profit off of it as well. The classic method for studying human diseases in animals is to allow the animal to get the disease, kill and dissect the animal, then ask, “What happened.” In cancer and other fast changing processes that traverse the body, this method is bound to miss something. **(**White, Richard, MD, PhD) Scientists have lacked a full understanding what steps blood stem cells must take to do their job. **(**White, Richard, MD, PhD) By studying how the stem cells embed and build blood in the fish. He first irradiated a transparent fish’s bone marrow, then transplanted fluorescent blood-forming stem cells from another zebrafish. By four weeks, the fluorescent stem cells had visibly migrated and grown in the fish’s bone marrow, which is in the kidney. Even individual stem cells were visible, something researchers haven’t easily observed in a living organism. **(**White, Richard, MD, PhD) What I took away from this article, researchers are still trying to figure how cancer works. It opened up my eyes and mind that yes, animals can be test subjects if it means finding a cure to such diseases. I think dissecting a transparent fish is a great idea. You are able to see and try to examine how and why cancer spreads. The fish’s brain, heart, and digestive tract are all visible. “What happens in a living organism is different than what happens in a dish.” **(**White, Richard, MD, PhD)

References:

**White, Richard, MD, PhD. "Transparent Adult Zebra Fish Will Make Human Biology Even Clearer." Science Daily. February 7, 2008. Accessed March 18, 2017. https://sciencedaily.com/releases/2008/02/080206121513.htm.**