Cancer patients find hope in immunotherapy drug that exploits genetic glitches

In August 2014, [colon cancer patient Stefanie Joho] stumbled into Johns Hopkins University for her first infusion of the immunotherapy drug Keytruda…[W]ithin just days, the excruciating back pain had eased. Then an unfamiliar sensation — hunger — returned…As months went by, her tumor shrank and ultimately disappeared. She stopped treatment this past August, free from all signs of disease.

[This clinical trial] showed that immunotherapy could attack colon and other cancers thought to be unstoppable. The key was their tumors' genetic defect, known as mismatch repair (MMR) deficiency — akin to a missing spell-check on their DNA. As the DNA copies itself, the abnormality prevents any errors from being fixed. In the cancer cells, that means huge numbers of mutations that are good targets for immunotherapy.

…

In the United States, researchers estimate that initially about 15,000 people with the defect may be helped by this immunotherapy. That number is likely to rise sharply as doctors begin using it earlier on eligible patients. Joho was among the first.

…

The studies were the foundation of the FDA's decision on [May 23] to green-light Keytruda to treat cancers such as Joho's…This first-ever "site-agnostic" approval by the agency signals an emerging field of "precision immunotherapy."

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: 'This is not the end': Using immunotherapy and a genetic glitch to give cancer patients hope