# How much can we actually tell from a genome scan?

On August 6, researchers announced in The New England Journal of Medicine that they had found that mutations in a gene called PALB2 greatly increase the risk of breast cancer. This is one of the biggest developments since the discovery in the ’90s of the role of mutations in the BRCA1 and BRCA2 genes in breast andovarian cancer.

The response among patients has been predictable. One woman’s email to me summed it up: “I’d like to get an entire genome scan to rule out a hidden cancerdiagnosis.”

Genetic testing has revolutionized how we think about cancer, allowing us to make some decent predictions about who might get certain cancers and who might benefit from preventive treatments. Many know the story of Angelina Jolie, who used her family history to learn she had a BRCA1 mutation. She chose to have a double mastectomy instead of waiting to see if she developed cancer. We may not envy this choice, but we do appreciate the power that comes with taking evidence-based action against a deadly disease. Many of us want that power for ourselves.

The problem is that many patients think genetic testing can tell us far more than it does. Despite the exaggerated claims of some entrepreneurs and lab owners, we can’t predict patients’ cancer risk and advise them appropriately just by sequencing their genome. At least not yet.

**Read the full, original story: Cancer and the secrets of your genes**