

A simple new blood test that can catch cancer early

While cancer often **conjures** up emotions of sadness, anger and fear, we are starting to win the war. In fact, we lie at the intersection of three of the most exciting developments within cancer research.

First of all, is cancer genomics. Changes in the DNA called mutations are what drive these cancers to go out of control; second is precision medicine, also known as "personalized medicine". And the third is immunotherapy. Scientists have been able to **leverage** the immune system in the fight against cancer. The key, then, is to apply all these exciting advancements in cancer therapy earlier. The current best ways to screen for cancer fall into three categories; medical procedures, protein biomarkers, and imaging techniques.

On the other hand, our technology is a simple blood test. Cancer cells grow and die faster than normal cells. DNA is shed into the blood system, so we can look for these small amounts of DNA in blood. We extract DNA from blood; we **enrich** this DNA for areas of the genome which are known to be associated with cancer; we sequence the DNA and apply statistical and computational methods to be able to find an indicative of the small amount of cancer DNA in blood.

Even with the therapies we have currently, this could mean that millions of lives could be saved, so the end of cancer is in sight.

I think that studies like this make a great difference on the treatment of diseases related to cancers that are very expensive, hurtful and lethal. But I couldn't go so far saying that the end is near, because of the complexity of those groups of illness.