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Biomarker testing is an important step for accessing precision medicine, including targeted therapies that can lead to improved survivorship and better quality of life for cancer patients. While most current applications of biomarker testing are in oncology and autoimmune disease, there is research underway to benefit patients with other conditions including heart disease, neurological conditions like Alzheimer's disease, infectious disease and respiratory illness.

Biomarker testing is often used to help determine the best treatment for a patient.

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**The Importance of Biomarker Testing**

- Of oncology drugs launched in the past five years require or recommend biomarker testing prior to use.
- Of cancer clinical trials involved biomarkers.

**Biomarker Testing & Health Equity**

- Not all communities in New York are benefitting from the latest advancements in biomarker testing and precision medicine.
  - Patients who are older, Black, uninsured or Medicaid-insured, are less likely to be tested for certain guideline-indicated biomarkers.
  - There are lower rates of testing in community settings versus academic medical centers.

**The Bottom Line**

Access to appropriate biomarker testing can help to achieve:

- better health outcomes
- improved quality of life
- reduced costs

Insurance coverage for biomarker testing is failing to keep pace with innovation and advancement in treatment:

- Without action, this could increase existing disparities in cancer outcomes by race, ethnicity, income and geography.

Arizona, Illinois, Louisiana and Rhode Island have recently passed legislation to expand coverage of comprehensive biomarker testing.

- Of oncology providers reported that insurance coverage is a **significant or moderate barrier** to appropriate biomarker testing for their patients.

In New York:

- Of commercial insurance plans provide coverage that is more restrictive than National Comprehensive Cancer Center guidelines.
"Biomarker testing opened the door to the treatment that saved my life."

Giovanna Whitting
Memorial Sloan Kettering

My name is Giovanna Whitting, and I nearly died of thyroid cancer. Biomarker testing opened the door to the treatment that saved my life.

I found out I was sick when I was just eight years old. I was having breathing problems. And one day, my mom gave me a bowl of Cheerios and I couldn’t eat it because I couldn’t swallow. It turned out I had a tumor in my throat. I had an aggressive form of thyroid cancer. I had four surgeries to remove the tumor, but it was tricky because it was wrapped around my vocal cords. So, they had to leave about 5% of it because it was too dangerous to take out. My doctors told me there were no further treatments available for me at that time. So, I took medicine to regulate my thyroid function, but nothing for the cancer.

I was very much underweight and very weak. Life was very hard because I still had a lot of the cancer symptoms. I had a routine where every morning I would cough so bad I would throw up. It was heartbreaking because my mom had to hear it every single day.

When I was 15 or 16, I found out that the cancer had spread to my lungs. The doctors were very straight up with me and said, "Things are not looking good for you right now. We need to figure out an option here." But they weren’t confident that anything would work. It was at that point that I decided I didn’t want to fight anymore. I told my mom and said, "Look, I have been fighting my entire life and it gets to the point where you’re exhausted, and you just want to die." She was very adamant. She said, "This story isn’t just about you, it’s about the people all around you. It’s the people who love you. You need to fight. This is what you were destined to do."

Very soon after, my oncologist came to me. He said there was a clinical trial based on biomarker testing and you’re a fit. This might work for you. I didn’t want to get my hopes up, but of course I said, "Yes, let’s do it." The trial itself was easy. Two pills in the morning and two pills at night. The morning after the first day of treatment, something was different. My cough was gone. I wasn’t throwing up. My lungs didn’t feel like they were going to die. I could breathe.

The instant relief I felt was indescribable. To this day, I still can’t process that. Never in a million years did I think symptoms would just disappear after one dose. It felt like a miracle. And I don’t even think my doctor can explain how it happened. But I do know it wouldn’t have been possible without biomarker testing.

I’m 21 now, and my life is completely normal. I have amazing friends and a wonderful boyfriend. I’m studying journalism at Penn State, and it is my dream to advocate for kids with cancer because I’ve been doing this since I was eight years old. I know that any story I tell will include the crucial role of biomarker testing in cancer cures that seemed impossible just a few years ago.

Learn more at FightCancer.org/NYBIO  For more information please contact:
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