

**HEALTH**

# Immunotherapy improves patient's chance of fighting breast cancer

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Dr Emran Imami with immunotherapy patient Laneisha Hayes. *Olivia Magee/Special To FLORIDA TODAY*

In September, Laneisha Hayes heard what no woman wants to hear: she had breast cancer.

The Palm Bay resident had been diagnosed with triple negative breast cancer, or TNBC, which the Centers for Disease Control and Prevention has compared to a keyless door because of the treatment difficulties it presents.

While other types of breast cancer at least provide receptors, or “locks” that specialists attempt to open with treatment “keys” such as hormone therapy, with TNBC the locks aren’t there, rendering it harder to treat.

This type of cancer has other insidious characteristics.

“TNBCs present with rapid growth and are more likely to be diagnosed clinically rather than mammographically,” said Dr. Pavan Kancharla, oncology specialist with Cancer Care Centers of Brevard.

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Beyond its rapid growth, it is also aggressive and more likely to have already spread before it is discovered. It is also more prone to return after treatment. The five-year survival rate for cancers that has spread nearby is 65 percent, as opposed to 86 percent for all breast cancers.

TNBC also targets younger individuals.

“In one study, there was a two-fold higher attributable risk of TNBC in women under 40 years, compared with women over 50 years,” added Kancharla.

Since it accounts for up to 20 percent of all breast cancer, TNBC has been the subject of intense research for options to slow down its progress. Traditionally treated with a combination of surgery, radiation and chemotherapy, TNBC also seems to respond to neoadjuvant chemotherapy, or chemo before surgery.

Researchers have also discovered that the addition of immunotherapy before surgery may prove an effective addition to the arsenal of treatment options for this cancer. However, while promising, the treatment is not appropriate for all patients.

As a breast surgeon, Dr. Emran Imami of TEPAS Healthcare in Melbourne is usually the first to diagnose breast cancer after patients present with abnormal mammograms or symptoms. At the initial stage of diagnosis, Imami may refer a patient for immunotherapy.

“From the surgeon’s perspective, we evaluate the tumor size, breast size and skin and lymph node involvement to determine which patients may benefit from medical therapy prior to surgery,” Imami said. “Patients with small TNBC that involve lymph nodes, or cancers two centimeters or greater benefit from receiving an 18-week course of immunotherapy before surgery.”

Hayes’ cancer met those parameters, so she has already begun a course of immunotherapy.

The immune system, the body’s sentinel, defends it against foreign invaders such as cancer by ramping up the production of antibodies, proteins that attack antigens, substances cells don’t recognize. Antibodies attach themselves to antigens, recruiting other immune system cells to destroy the cells with antigen.

It gets more complicated.

“An important part of the immune system is its ability to keep itself from attacking normal

cells,” Kancharla said. “To do this, it uses checkpoints, which are proteins on immune cells that need to be turned on or off to start an immune response. Breast cancer cells sometimes use these checkpoints to avoid being attacked by the immune system. Drugs that target these checkpoint proteins help to restore the immune response against breast cancer cells.”

Immunotherapy medicine to treat cancer turbocharges the immune system to make it fight cancer cells harder and more efficiently.

The U.S. Food and Drug Administration has approved several immunotherapy medicines to treat breast cancer.

Keytruda, for example, is used with chemotherapy for early stage TNBC with a high risk of recurrence.

Hayes was introduced to Keytruda in October.

“I tolerated the first Keytruda session well,” she said. “I had some nausea that was easily remedied with medication.”

While it is still too early to see results, Hayes remains optimistic.

“In my opinion, I would think some progress should be seen by December of 2021 or early January of 2022,” she said.

This treatment option is still in its infancy, but specialists such as Imami and Kancharla believe that combining immunotherapy with other treatment offers a significantly better outcome.

“Trials demonstrate that the addition of pembrolizumab (Keytruda) to neoadjuvant chemotherapy raised the overall pathological complete response rate from 51 to 65 percent,” said Kancharla.

While it is not an army of a cure, immunotherapy is definitely an additional soldier in the fight.

“It shrinks the tumor, allowing for better cosmetic and curative resection,” Imami said.