Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/project-oncology/what-to-know-about-esr1-mutations-in-hrher2-metastatic-breast-cancer/16204/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

What to Know About ESR1 Mutations in HR+/HER2- Metastatic Breast Cancer

Announcer Introduction

You're listening to *Project Oncology* on ReachMD. On this episode, which is sponsored by Stemline, a Menarini Group company, we'll hear from Dr. Mariya Rozenblit, who's an Assistant Professor of Medicine in the Section of Medical Oncology at the Yale School of Medicine in Connecticut. Dr. Rozenblit is here to discuss ESR1 mutations in HR+/HER2- metastatic breast cancer. Let's hear from her now.

Dr. Rozenblit:

So ESR1 mutations are typically acquired in patients who have hormone-positive metastatic breast cancer after they've been on endocrine therapy for a while, usually for a couple of months. When we talk about endocrine therapy, we're talking about aromatase inhibitors or tamoxifen in our patients who are usually receiving this in combination with CDK4/6 inhibitors in the first-line setting.

So the effect of ESR1 mutations on the treatment of metastatic breast cancer is that it makes the cancer cells resistant to the current endocrine therapy that these patients are on. So what we often see is patients will be stable, meaning that their cancer is not growing or even may be shrinking a little bit on first-line therapy, and after several months, we see on the repeat staging scans that the cancer is starting to grow. When we do tests, we often find that the reason why the cancer cells have become resistant to the current treatment is that they've acquired this ESR1 mutation.

And the mechanism behind that is that the mutation itself actually makes the estrogen receptor active, regardless of the estrogen. So, as we all know, aromatase inhibitors work by inhibiting the production of estrogen in peripheral tissues like fat cells and adrenal glands whereas tamoxifen is what's called a selective estrogen receptor modulator, so it binds to the receptor and prevents estrogen from binding.

The ESR1 mutation is a mutation in the estrogen receptor itself, which just makes it active. So it's active regardless of whether estrogen is binding to the receptor itself. And so therefore, as you can imagine, things that are preventing binding or decreasing estrogen in the environment are no longer effective once this mutation is present.

So identifying the ESR1 mutation is incredibly important, one, because it has an effect on prognosis. We know that once patients have this mutation, they have a shorter progression-free survival on the typical estrogen therapies that we have, like aromatase inhibitors or tamoxifen. It's also important because there are now novel therapies out there that we know are specifically more effective in patients who have this ESR1 mutation.

Announcer Close

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