

### Transcript Details

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## Assessing the Impact of Guiding EBC Treatment Decisions with Prognostic Markers

### Announcer Introduction

Welcome to Project Oncology on ReachMD. On this episode, sponsored by Lilly, we're joined by Dr. Pavani Chalasani, an Associate Professor of Medicine and Program Director of the Hematology/Oncology Fellowship at The University of Arizona. Dr. Chalasani is here to share how prognostic markers can help guide treatment decisions in early breast cancer. Let's hear from her now.

### Dr. Chalasani:

A prognostic factor is defined as a factor which helps in defining information or providing information in the clinical outcome, at the time of diagnosis, independent of therapy. One of the initial prognostic markers which have been developed for breast cancer were estrogen receptor and the progesterone receptor expression. They have been known to have a good prognostic factors, and this was one of the first of which were diagnosed. Subsequently, since then, we've learned and developed a lot of prognostic factors, with age, menopausal status, race, smoking, mammographic features, like, you know, detection – is it by screening or is it because of a clinical exam. These are all known to be prognostic factors. In addition, the pathological factors of the tumor depend on the state of the tumor, which depends on the size and the nodal involvement, and if there is an appearance of metastatic disease. Among the morphology, if it is noninvasive ductal cancer, versus lobular cancers, they are known to be prognostic. The grade of tumor, lymphovascular invasion, these are the traditional ones. Ki67 has been shown in some studies, but there is a lot of controversy because there is a heterogeneity inconsistency among some of the prospective studies and methodological issues of the regions, the procedures and the scoring, so it is not still used as a routine prognostic factor in breast cancer. Like I mentioned, hormone receptor status, ER and PR expression are generally associated with breast cancer outcomes. The HER2 expression assay is a part of routine diagnostic work-up for all breast cancers, and over-expression contends to an unfavorable prognosis, particularly the non-treated with chemotherapy and HER2-directed therapies. However, since the treatments and we've discovered HER2-targeted therapies, the outcomes have improved, provided the patients are treated for that. Most recently, and most commonly, the ones that we used are gene-expression based, prognostic assays, there are multiple assays which are available for a routine clinical practice. Recurrent score 21, mammo-current, endo-predict, breast cancer index are a few of the several known assays which are available. And like I mentioned, a lot of these assays give information in terms of tumor recurrence, the risk of labs, in general, need to absorb fat, and there is some information in terms of overall survival, also based on this prognostic factors. So we have that information currently available.

So typically, when a patient with breast cancer comes to the clinic, we look at the pathology report, look at all the pathological factors. We take in the patient factors into account and also gene expression assays. We use all of them together to get them the information and try to explain what the prognosis is. Based on that, the treatment decisions are also made, you know, like is there benefit of having chemotherapy? What is the benefit of having endocrine therapy? And how much benefit are individual patients getting? We are able to try to use all these prognostic factors, and some of those assays and some of these markers are also predictive, what that means is how much benefit are treatments going to make in such a setting for these patients? So we are also able to use them to kind of help guide and personalize the treatment decision for the patient.

### Dr. Chalasani:

So there is still a lot of ongoing questions, and we need more information. There is now the question is endocrine therapy used, and the duration of endocrine therapy used. We are getting more and more data with that, but trying to figure out who exactly needs that. One of the assays which is used commonly to know if there is a predictive benefit of chemotherapy addition is Recurrent Score 21. But while we know there is a benefit of having chemotherapy, we do not know which type of chemotherapy, so we need information and further testing, and assays, and more information on that. And also, a particular type of markers which would help figure out what kind of

responses or who might benefit from the addition of the CDK4/6 inhibitors. So not only giving information on prognosis, but also if they can also help in predictive of treatments that will help in giving us most information to talk to our patients– to help guide their treatment decisions.

Announcer Close

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