

# cancer NEWSLINE

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>> Welcome to Cancer Newsline, your source for news on cancer research, diagnosis, treatment, and prevention. I'm your host, Lisa Garvin. Our guest today is Dr. Sapna Patel. She's an assistant professor of Melanoma Medical Oncology and we're going to be talking about early successes with immunotherapy and advanced melanoma. Dr. Patel this is where we've really seen early successes with immunotherapy is in melanoma. How's it going?

>> Yeah that's right. So now in melanoma we hardly even use chemotherapy these days. We harness the power of someone's intact immune system to try to recognize and fight cancer. The reason this is so powerful is the immune system has two major properties; it has specificity, so it's very specific against what it's fighting, and it has memory. So there's long term ability of the immune system to remember what it's fighting long after medicine is stopped being given. So in melanoma we've certainly seen success with drugs such as ipilimumab, and now newer drugs such as pembrolizumab and nivolumab. These are outpatient infusions that are given every few weeks and these treatments are able to control metastatic melanoma.

>> And so that's really where the early success was seen. Now is this melanoma that spread from its original location or is it a secondary cancer?

>> So it's melanoma that spread from its original location, usually to a distant metastatic organ, but we're also studying now the use of these drugs in the prevention stage. In other words you've had your melanoma, it has not spread to a distant organ, can some immunotherapy in that period prevent the disease from spreading?

>> I know that ipilimumab is a CTLA4, it focuses on CTLA4; are the other drugs focusing on that same checkpoint?

>> They focus on a different checkpoint and it's called PD1. So we think of CTLA4 as an early checkpoint maneuver and PD1 as a late checkpoint and so PD1 blocking agents block downstream. There is also utility in combining CTLA4 blockade early checkpoint with PD1 blockade.

>> Now it's being used just on metastatic melanoma patients now. Do you see, as you're treating more patients, do you see applications with people with earlier stages of disease?

>> Absolutely. So ipilimumab received FDA approval in 2011 for advanced metastatic melanoma. In 2015 the FDA granted approval for adjuvant therapy; that means melanoma that's been removed locally and has not yet spread to a distant organ. Ipilimumab shows that there is a potential to improve that relapse rate, as well as overall survival.

>> Because usually with metastatic patients I assume they've already had surgery.

>> Correct.

>> Now in these earlier stage patients are you able to skip surgery?

>> We haven't gotten to that point yet, so still surgery is the definitive treatment for early stage melanoma.

>> And I do know that immunotherapy does have side effects, you know, and these are things you only discover through, you know, more people being on the drug. What sorts of side effects have you seen?

>> So very different than chemotherapy side effects. If you think of chemotherapy as poison that we put in the body and fingers crossed it kills the cancer without killing the host immunotherapy is not poison; you can touch it, you can spill it, it's not a problem. Immunotherapy is more like vitamins or nourishment going to the immune system to grow something. In that regard the symptoms do not look poisonous; you're not losing your hair, you're not having nausea vomiting, diarrhea necessarily, but with immunotherapy you have side effects wherever the immune system overreacts. So in everyone, because we house a large immune system in our skin, everyone will develop itching, and sometimes a rash. Other people will develop over activity in their gut and that will manifest as diarrhea, and the fancy word is colitis, which is inflammation of the colon. Other patients can develop a dry cough or shortness of breath, and that's inflammation in their lungs, pneumonitis. But frankly any organ in the body can develop inflammation from joints, arthritis, to eyes, to brain, kidneys, nephritis, so we monitor for all of these rare inflammatory side effects that definitely do look different than chemotherapy.

>> So in your mind Dr. Patel, is this a game changer for melanoma?

>> Immunotherapy is a game changer for all of oncology. It's now teaching us that instead of having to poison a patient in hopes of killing cancer we can actually build on an existing immune system. Again, yeah that immune system has long term memory if things go right. So this has been a game changer in melanoma but has the potential to impact all of oncology.

>> Great. Thank you very much. For more information visit [mdanderson.org](http://mdanderson.org). Thank you for listening to Cancer Newsline. Tune in for the next episode in our series.

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