Melanoma Updates 2020

Future Prospects for Immunotherapy Agents in Advanced Melanoma

Dr. Michael Postow, M.D.

Medical Oncologist, Chief, Melanoma Services Memorial Sloan Kettering Cancer Center

Dr. Michael Postow: My name is Dr. Michael Postow, and I'm the chief of the melanoma service at Memorial Sloan Kettering Cancer Center in New York City. It's my pleasure today to talk about several important topics relevant for patients with melanoma in terms of understanding their treatment options and how we're moving forward as a field. Lastly, I wanted to talk about future prospects for immune therapy in melanoma. We certainly hope that everyone responds to the first treatment that we give them, and that we know that there are a great number of patients that will have really good long-term responses to either immune therapy in melanoma, or BRAF MEK directed, targeted therapy for those patients that do have the BRAF mutation as we were talking about previously. But we're always trying to come up with something new, and until absolutely every patient or a hundred percent of them are responding to treatments, there's more work to be done.

So, what other strategies are on the horizon for immune therapy in patients with melanoma? There are so many, I'll bring up a couple of ways that we're thinking about this. One strategy for immune therapy in melanoma for the future is a treatment called tumor infiltrating lymphocytes therapy. Tumor infiltrating lymphocytes is often abbreviated TIL, T I L, And TIL therapy is actually an old concept that's been studied for many years, but it's getting close to FDA approval now based upon really promising data that have come forward in patients that had had prior immune therapy. And essentially how it works is that a tumor is removed surgically from the body. And then the lymphocytes, which are part of the immune system cells are extracted from the tumor, expanded on the laboratory. So many more of those lymphocytes or cancer-fighting immune cells are developed in the laboratory based upon the retraction of them, harvested them from these tumors that are surgically removed.

And then those lymphocytes are infused back into patients. It needs to be infused back into patients with some chemotherapy in a cytokine called interleukin tube, but once those immune cells are infused back into patients, they can proliferate and divide and then go seek a destroyed melanoma tumor cells in different places. And that is a really

new emerging strategy for something new, to look forward to it in a way of treating melanoma patients it's been worked on for many, many years, and we're. getting very close to FDA approval. So hopefully we'll have much more access to these types of treatments moving forward for a lot different patient populations. The other strategy I'll mention is that there are now antibody approaches that are being tested that essentially bring T cells from the immune system in close proximity to a tumor. And the idea is that hopefully those T cells would kill the tumor. So think about it as almost like a matchmaker or a double sided spoon, if you will.

That one side, the spoon kind of sinks into a tumor cell. And on the other side of the spoon, it grabs a T cell sticks, these two things together. And that the idea is that the T cell will ultimately kill the tumor. And these are called bio specific antibodies. Sometimes bi-specific T-cell engagers or bytes. That's another strategy in clinical development that's showing some promise in melanoma patients, and hopefully we'll have some data that will support approvals of these types of agents in melanoma in the near future as well. But that remains a very exciting area of research. Lastly, I'll mention that with immune therapy, a lot of agents are being combined with all kinds of different treatments, and there are many different combinations of checkpoint blocking antibodies with immune therapy, with other modifiers of the tumor micro environment.

So, the idea is that if we could find a way to make the tumor more immunogenic and more appealing to an immune response, then hopefully the immune system would combine well with those drugs and then seek and destroy the melanoma tumors. So there's so many different combinations in that respect that are being tested in addition to the standard treatments that we were talking about earlier, that hopefully in the future, we will move forward such that all patients with advanced melanoma will have a great chance of responding. And it will just be a matter of trying to see which patient should be matched with which particular combination based upon which biomarkers. So a lot to look forward to in this area. And it was a pleasure to speak with you today on behalf of our organization. Thank you.