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Is there a future for immunotherapy in MDS?

Welcome to *Managing MDS*. I am Dr. Ellen Ritchie. I am frequently asked, “Is there a future for immunotherapy in MDS?” That is an excellent question because we are just starting to look at the impact of immunotherapy in hematologic malignancies. We have already seen that in the treatment of other leukemias, like CLL (chronic lymphocytic leukemia) and ALL (acute lymphoblastic leukemia), that immunotherapy can be an extremely important weapon in achieving a complete response. This year, there are going to be a number of initiatives looking at using immunotherapy in acute myeloid leukemia (AML) where antibodies to different targets, antibodies that connect a T-cell with a particular target on a myeloid cell, and even CAR T technology will be looked at for a treatment option in patients with AML. These trials will be very important to watch, both for the efficacy of the treatment and the toxicities of the treatment to see whether or not this kind of technology is feasible in treating patients with AML.

Once we have been able to determine how efficacious these therapies are in the treatment of AML, it may be possible to bring them into the armamentarium to treat higher-risk MDS. The clinical trials looking at the toxicities and efficacy in AML will be very, very important in determining whether or not this technology can be brought, especially to older patients who have myelodysplastic syndrome that is of high risk. It may be also that some of this immuno technology could be used as a bridge to transplant. Instead of giving patients chemotherapy as a bridge to transplant if they have high-risk MDS, it may be possible to use immunotherapy to get them to that space. That could be less toxic than using chemotherapy, which would be a boon especially to the older myelodysplastic syndrome patient. I am very much looking forward to seeing the outcomes of the trials that are currently in development using different forms of immunotherapy in acute myeloid leukemia and their possible use in the future in myelodysplastic syndrome.

In solid tumors, there has been a lot of interest in using checkpoint inhibitors, such as PD-1 and anti-LAG inhibitors, to improve outcome in patients with solid tumor receiving chemotherapy. These are just starting to be integrated into the treatment of myelodysplastic syndrome patients, combining them with a common therapy such as azacitidine or decitabine. These trials also need careful scrutiny to see whether or not the addition of these kinds of agents to the treatment of myelodysplastic syndrome improves outcome and decreases toxicity of treatment in these patients. The toxicities are very important in the treatment of older patients, who are the majority of patients with myelodysplastic syndrome. We will all be watching these clinical trials with great interest and hope that there will be a future for immunotherapy in the treatment of myelodysplastic syndrome. Thank you for viewing this activity.