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/investigating-the-impact-of-exercise-on-cancer-immunotherapy-outcomes/35680/

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Investigating the Impact of Exercise on Cancer Immunotherapy Outcomes

Announcer:
You're listening to *Project Oncology* on ReachMD. On this episode, we'll hear from Dr. Samhitha Gundakaram, who's an Internal Medicine Resident at the Marshall University Joan C. Edwards School of Medicine in Huntington, West Virginia. She'll be discussing her research on the role of exercise in modulating immunity and immunotherapy outcomes in patients with cancer, which she co-authored and presented at the 2025 Annual Meeting of the American Society of Clinical Oncology. Here's Dr. Gundakaram now.

Dr. Gundakaram:
So studies have shown that immunotherapy is an emerging concept in modern medicine and in cancer treatments. But immunotherapy has different effects on people; it doesn't work the same in you and me. There could be several different possibilities and reasons for why everybody doesn't get the same kind of response. That could be genetics; that could be physical status; that could be prognostic indicators. One of the issues I thought was probably exercise.

So exercise has been shown to have a strong association or relationship with immunity or general immune function of the body. Some of the studies that I included in my paper as well have shown that exercise, in fact, increases the amount of lymphocytes that stream in your blood, so one of the hypotheses that we created was: Does exercise have any role to play in outcomes related to immunity and immunotherapy? It is a known fact that exercise has a role to play with immunity, but our add-on question was: Does it have a role to play in immunotherapy? So that's why we did the systematic review. And our main outcomes that we were targeting were if there was any change in immunity or immune function and if there was any change in biomarkers of immune function, overall quality of life, or any other treatment outcomes after exercise and after people got immunotherapy.

In total, we included eight studies that met our inclusion criteria, which covered different cancer groups like lymphomas, melanoma, non-small cell cancer, breast cancer, and ovarian cancer, and we found that in these eight different studies, people used different modalities of exercise: some used yoga, some used cycling, and some used resistance training. But all of them showed that exercise had a positive impact on immune function, and in fact, two of the studies showed that after exercise, people were noted to have an increase in T cells and NK cells in their bloodstream, like they were more mobilized to the periphery. That shows immune cells like T and NK cells are needed to fight cancer cells, and these are the same kind of cells that were increased in the bloodstream after a bout of exercise. Other studies showed that some of them were treated with rituximab, one of the immunotherapy agents, and after that, they had better outcomes in people who were exercising. But there were no standardized protocols or enough clinical trials that actually prove the benefit.

If there could be more studies and if they prove that exercise has a role in cancer care, that means that it's going to help in cost-cutting, and in addition to that, there's increased quality of life in patients. And increased treatment outcomes means that you're increasing longevity and improved treatment response. So all in all, if it's proven to have benefit, it's going to bring better patient outcomes, better quality of life, and better mental health as well. There is room for more research and room for increasing or enhancing our knowledge on this because the benefits can be huge.

Announcer:
That was Dr. Samhitha Gundakaram discussing her recent findings on the role of exercise in modulating immunity and immunotherapy outcomes in patients with cancer. To access this and other episodes in our series, visit *Project Oncology* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!