Advantages and Limitations of Wearable Activity Trackers: Considerations for Patients and Clinicians

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Background: Exercise, light physical activity, and decreased sedentary time all have been associated with health benefits following cancer diagnoses. Commercially available wearable activity trackers may help patients monitor and self-manage their behaviors to achieve these benefits.

Objectives: This article highlights some advantages and limitations clinicians should be aware of when discussing the use of activity trackers with cancer survivors.

Methods: Limited research has assessed the accuracy of commercially available activity trackers compared to research-grade devices. Because most devices use confidential, proprietary algorithms to convert accelerometry data to meaningful output like total steps, assessing whether these algorithms account for differences in gait abnormalities, functional limitations, and different body morphologies can be difficult. Quantification of sedentary behaviors and light physical activities present additional challenges.

Findings: The global market for activity trackers is growing, which presents clinicians with a tremendous opportunity to incorporate these devices into clinical practice as tools to promote activity. This article highlights important considerations about tracker accuracy and usage by cancer survivors.