In their paper, Gernigon et al. evaluated the test-retest reliability of Global Positioning System (GPS) derived measurements in patients with claudication under community walking conditions. They showed that the reliability of greatest walking distance and average of walking speeds are high, despite the variability of the different measured distances between two symptom limited stops during a 1 hour stroll. This suggests that GPS technology offers new perspectives in the individual evaluation of walking ability and that it might help in objectively evaluating the severity and the impact of claudication in a patient in his daily life. However, we would like to make some points on the paper.

The first point is that the methodology suffers from several limitations. Twenty patients were included over a 30 month period and three of them were excluded because of some GPS issues. Moreover, there was no standardization between the two series of evaluations, with the second test being performed within 30 days of the first, under potentially different environmental conditions. Total time walking duration was sometimes longer than 1 hour and it is possible that walking 25% longer could change the results. The small sample size, the long duration of the study, the outdoor stroll, and the lack of standardization could have influenced biased the results.

The second point is the logistics of these measurements. The authors mentioned that the potential advantages of GPS technology in the setting of claudication include price of the test and the time saving. However, the cost of the GPS device, the time needed to equip the patient and explain the procedures, and the time to learn how to analyze the GPS recording were not taken into consideration. The authors also described some adjunctive procedures that could help in improving GPS data interpretation (heart rate, near infrared spectroscopy, temperature), but it is expected that the cost of GPS devices able to record such physiological parameters would be high.

Finally, it has already been demonstrated that exercise therapy with hospital or community based training under the supervision of a physical therapist or other trained medical personnel is superior to other forms of exercise therapy, and that increased supervision tends to lead to a greater improvement in walking distance. As a result, supervised exercise has been given a class I, level of evidence A recommendation by the American College of Cardiology/American Heart Association. Moreover, supervised exercise therapy is more cost-effective.

In any case, this paper opens the door towards remote evaluation of multiple variables associated with physical activity in claudicants and could help to objectively measure the impact of a given treatment in the patient’s specific daily life conditions. Patients merely have to remember not to leave their smartphone at home!

REFERENCES